



# STIC Search Report Biotech-Chem Library

STIC Database Tracking Number: 141030

To: Sarvamangala Devi  
Location: REM 3C18  
Art Unit: 1645  
Wednesday, December 22, 2004  
Case Serial Number: 10/039383

From: Beverly Shears  
Location: Remsen Bldg.  
RM 1A54  
Phone: 571-272-2528  
beverly.shears@uspto.gov

## Search Notes

Shears, Beverly

From: Devi, Sarvamangala  
Sent: Thursday, December 16, 2004 9:40 AM  
To: Shears, Beverly  
Subject: 10/039,383

Beverly:

Please perform a text search for the following claims in application 10/039,383:

Claim 10. A method for protecting a porcine animal against disease caused by *Mycoplasma hyopneumoniae* comprising the step of administering to said porcine animal a vaccine composition which comprises an immunizing amount of a *Mycoplasma hyopneumoniae* bacterin (killed or inactivated *Mycoplasma hyopneumoniae*), an adjuvant mixture comprising a polyacrylic acid polymer and a mixture of metabolizable oil and a polyoxyethylene-polypropylene block copolymer (i.e., a mixture of squalane and Pluronic L121 mixture and 2% Carbopol), a pharmaceutically acceptable carrier which vaccine composition, after a single administration elicits protective immunity from *Mycoplasma hyopneumoniae* infection, and wherein the step of administering to said porcine animal is done by a method chosen from the group consisting of intramuscular injection, subcutaneous injection, oral administration and nasal administration.

claim 11. The method of claim 10, wherein the bacterin is *Mycoplasma hyopneumoniae* DNA cell equivalents. (MHCE/mL).

Claim 14. (Original). The method of claim 10 wherein the adjuvant mixture consists of an acrylic acid polymer and a mixture of metabolizable oil that comprises one or more terpene hydrocarbons and a polyoxyethylene-polypropylene block copolymer present in a final concentration of about 1-25% v/v.

Claim 15. (Currently amended). The method of claim 14, wherein the polyacrylic acid polymer of the adjuvant mixture is CARBOPOL.

Claim 16. (Currently amended). The method of claim 14, wherein the metabolizable oil of the adjuvant mixture is a terpene hydrocarbon selected from the group consisting of squalene and squalane.

Thanx.

S. DEVI, Ph.D.

Date completed:

Searcher: Beverly 12/22/04

Terminal time: \_\_\_\_\_

Elapsed time: \_\_\_\_\_

CPU time: \_\_\_\_\_

Total time: \_\_\_\_\_

Number of Searches: \_\_\_\_\_

Number of Databases: \_\_\_\_\_

### Search Site

STIC

CM-1

Pre-S

### Type of Search

N.A. Sequence

A.A. Sequence

Structure

Bibliographic

### Vendors

IG

STN

Dialog

APS

Geninfo

SDC

DARC/Questel

Other

Devil S.  
10/039383

10/039383

FILE 'REGISTRY' ENTERED AT 09:35:31 ON 22 DEC 2004  
E SQUALANE/CN 5

L1 1 S E3  
E PLURONIC L 121/CN 5  
L2 1 S E3  
E CARBOPOL/CN 5  
L3 1 S E3

FILE 'CAPLUS' ENTERED AT 09:36:42 ON 22 DEC 2004

L1 1 SEA FILE=REGISTRY ABB=ON PLU=ON SQUALANE/CN  
L2 1 SEA FILE=REGISTRY ABB=ON PLU=ON "PLURONIC L 121"/CN  
L3 1 SEA FILE=REGISTRY ABB=ON PLU=ON CARBOPOL/CN  
L4 211 SEA FILE=CAPLUS ABB=ON PLU=ON (PORCINE OR PIG OR HOG OR  
SWINE) AND ((MYCOPLASM? OR M) (W) HYOPNEUMON?)  
L5 5 SEA FILE=CAPLUS ABB=ON PLU=ON L4 AND (L1 OR L2 OR L3 OR  
SQUALANE OR PLURONIC(W) ("L121" OR "L 121") OR CARBOPOL)  
  
L4 211 SEA FILE=CAPLUS ABB=ON PLU=ON (PORCINE OR PIG OR HOG OR  
SWINE) AND ((MYCOPLASM? OR M) (W) HYOPNEUMON?)  
L6 2 SEA FILE=CAPLUS ABB=ON PLU=ON L4 AND (POLYOXYETHYLENE OR  
POLY(W) (OXYETHYLENE OR OXY ETHYLENE) OR POLYOXY ETHYLENE) (S) (PO  
LYPROPYLENE OR POLY PROPYLENE)

L7 5 S L5 OR L6

L7 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN

ED Entered STN: 08 May 2003

ACCESSION NUMBER: 2003:349238 CAPLUS

DOCUMENT NUMBER: 138:358395

TITLE: Multivalent O/W or W/O/W oil adjuvant vaccines for  
animals using polymer emulsifiers and immunization  
with the vaccines

INVENTOR(S): Ogiya, Toshiaki; Katayama, Shigeji; Oda, Kenji

PATENT ASSIGNEE(S): Microbiochemical Research Foundation, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE     |
|------------------------|------|----------|-----------------|----------|
| JP 2003128578          | A2   | 20030508 | JP 2001-322475  | 20011019 |
| PRIORITY APPLN. INFO.: |      |          | JP 2001-322475  | 20011019 |

AB The vaccines contain biol. inactivated antigens and biol. active antigens  
and are manufactured by emulsification using polymer emulsifiers. Also  
claimed

is a method to immunize animals by dissolving live vaccine prepared by  
freeze-drying live viruses or bacteria in O/W inactivated vaccines  
containing

inactivated antigens in the aqueous phase prepared using polymer  
emulsifiers.

Polymer emulsifiers do not affect activities of viruses and bacteria

because they show no solubilizing action. Three suspensions of (a) formalin-inactivated cells of toxigenic Escherichia coli K88 and K99, (b) Bordetella bronchiseptica hemagglutinins, and (c) Pasteurella multocida toxin were emulsified with liquid paraffin containing mannitol oleate and **squalane** and the resulting W/O emulsion were added dropwise to aqueous solution of Sangelose 90L (hydrophobic hydroxypropyl Me cellulose) under homogenization to give 3 W/O/W oil adjuvant vaccines. These 3 vaccines were mixed with freeze-dried live vaccine containing attenuated **porcine** transmissible gastroenteritis virus and attenuated **porcine** epidemic diarrhea virus and injected to pregnant **pigs** twice. Antibodies of serum of immunized **pigs**, colostrum, and 7-day newborns were measured. These vaccines induced granulomatous tissue reaction only at the immunization site.

L7 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN  
 ED Entered STN: 24 Jan 2003  
 ACCESSION NUMBER: 2003:58612 CAPLUS  
 DOCUMENT NUMBER: 138:112399  
 TITLE: **Mycoplasma hyopneumoniae** bacterin vaccine  
 INVENTOR(S): Chu, Hsien-Jue; Li, Wumin; Xu, Zhichang  
 PATENT ASSIGNEE(S): Wyeth, John, and Brother Ltd., USA  
 SOURCE: U.S. Pat. Appl. Publ., 13 pp., Cont.-in-part of U.S. Pat. Appl. 2002 131,980.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE        |
|---|------|----------|-----------------|-------------|
| US 2003017171   | A1   | 20030123 | US 2002-150597  | 20020517    |
| US 2002131980   | A1   | 20020919 | US 2002-39383   | 20020108    |
| WO 2004058142   | A2   | 20040715 | WO 2003-US15115 | 20030514    |
| WO 2004058142   | A3   | 20041104 |                 |             |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                 |             |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |             |
| PRIORITY APPLN. INFO.:  |      |          | US 2000-256637P | P 20001219  |
|   |      |          | US 2002-39383   | A2 20020108 |
|   |      |          | US 2002-150597  | A 20020517  |

AB The invention provides an improved **Mycoplasma hyopneumoniae** bacterin vaccine composition, which advantageously provides immunity from infection after a single administration. The composition comprises an inactivated **Mycoplasma hyopneumoniae** bacterin and an adjuvant mixture, which, in combination, provide immunity from **Mycoplasma hyopneumoniae** infection after a single administration, and elicit an immune response specific to

**Mycoplasma hyopneumoniae** bacterin and including cell-mediated immunity and local (secretory IgA) immunity. In a preferred embodiment, the adjuvant mixture comprises an acrylic acid polymer, most preferably **Carbopol**, and a mixture of a metabolizable oil such as one or more unsatd. terpene hydrocarbons, preferably squalene or **squalane**, and a **polyoxyethylene-polypropylene** block copolymer such as Pluronic. The vaccine composition may optionally include a preservative, preferably thimerosol and/or EDTA. In another embodiment, the invention provides an improved **Mycoplasma hyopneumoniae** bacterin vaccine composition, which advantageously provides immunity from infection after a single administration, and comprises an inactivated **Mycoplasma hyopneumoniae** bacterin and an adjuvant or adjuvant mixture, which, in combination, provide immunity from **Mycoplasma hyopneumoniae** infection after a single administration, and elicit an immune response specific to **Mycoplasma hyopneumoniae** bacterin and including cell-mediated immunity and local (secretory IgA) immunity, in combination with other vaccine components.

IT 111-01-3, **Squalane**  
 RL: PAC (Pharmacological activity); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (adjuvant; **Mycoplasma hyopneumoniae** bacterin vaccine)

L7 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN  
 ED Entered STN: 28 Jun 2002  
 ACCESSION NUMBER: 2002:487412 CAPLUS  
 DOCUMENT NUMBER: 137:62143  
 TITLE: Improved **Mycoplasma hyopneumoniae** bacterin vaccine  
 INVENTOR(S): Chu, Hsien-Jue; Li, Wumin; Xu, Zhichang  
 PATENT ASSIGNEE(S): Wyeth, John, and Brother Ltd., USA  
 SOURCE: PCT Int. Appl., 28 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

| PATENT NO.    | KIND   | DATE     | APPLICATION NO. | DATE     |
|---------------|--|----------|-----------------|----------|
| WO 2002049666 | A2   | 20020627 | WO 2001-US47865 | 20011211 |
| WO 2002049666 | A3   | 20030206 |                 |          |
| W:            | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |          |                 |          |
| RW:           | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG   |          |                 |          |
| AU 2002028993 | A5   | 20020701 | AU 2002-28993   | 20011211 |
| EP 1343525    | A2   | 20030917 | EP 2001-990123  | 20011211 |
| R:            | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  |          |                 |          |

| IE, SI, LT, LV, FI, RO, MK, CY, AL, TR |             |                 |            |
|--|-------------|-----------------|------------|
| BR 2001016249                          | A 20040302  | BR 2001-16249   | 20011211   |
| JP 2004518655                          | T2 20040624 | JP 2002-551004  | 20011211   |
| BG 107898                              | A 20040831  | BG 2003-107898  | 20030611   |
| PRIORITY APPLN. INFO.:                 |             | US 2000-256637P | P 20001219 |
|  |             | WO 2001-US47865 | W 20011211 |

AB The invention provides an improved **Mycoplasma hyopneumoniae** bacterin vaccine which provides immunity from infection after a single administration. The vaccine comprises an inactivated **Mycoplasma hyopneumoniae** bacterin and an adjuvant mixture. In a preferred embodiment, the adjuvant mixture comprises an acrylic acid polymer, most preferably **Carbopol**, one or more unsatd. terpene hydrocarbons, preferably squalene or **squalane**, and a **polyoxyethylene-polypropylene** block copolymer such as Pluronic.

IT 111-01-3, **Squalane**  
 RL: AGR (Agricultural use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (in single-dose adjuvanted vaccine against **Mycoplasma hyopneumoniae** pneumonia of **swine**)

L7 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN  
 ED Entered STN: 23 May 2002  
 ACCESSION NUMBER: 2002:384881 CAPLUS  
 DOCUMENT NUMBER: 136:384969  
 TITLE: Vaccines and diagnostic reagents for **porcine** circoviruses and **porcine** multisystemic wasting syndrome  
 INVENTOR(S): Allan, Gordon; Meehan, Brian; Clark, Edward; Ellis, John; Haines, Deborah; Hassard, Lori; Harding, John; Charreyre, Catherine Elisabeth; Chappuis, Gilles Emile; McNeilly, Francis  
 PATENT ASSIGNEE(S): Merial, Fr.; The Queen's University of Belfast; University of Saskatchewan  
 SOURCE: U.S., 33 pp., Cont.-in-part of U.S. Ser. No. 82,558.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 6  
 PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|--|------|----------|-----------------|----------|
| US 6391314   | B1   | 20020521 | US 1998-161092  | 19980925 |
| FR 2769321   | A1   | 19990409 | FR 1997-12382   | 19971003 |
| FR 2769321   | B1   | 20011026 |                 |          |
| FR 2769322   | A1   | 19990409 | FR 1998-873     | 19980122 |
| FR 2769322   | B1   | 20020308 |                 |          |
| FR 2776294   | A1   | 19990924 | FR 1998-3707    | 19980320 |
| FR 2776294   | B1   | 20010622 |                 |          |
| US 6368601   | B1   | 20020409 | US 1998-82558   | 19980521 |
| EP 1281760   | A1   | 20030205 | EP 2002-17134   | 19981001 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, FI, CY |      |          |                 |          |
| EP 1386617   | A1   | 20040204 | EP 2003-16998   | 19981001 |

|  |               |             |   |  |
|--|---------------|-------------|---|--|
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, FI, CY | US 2002146432 | A1 20021010 | US 2001-884514  | 20010619   |
|  | US 6660272    | B2 20031209 |   |  |
| PRIORITY APPLN. INFO.:   | US 2004132178 | A1 20040708 | US 2003-653849<br>FR 1997-12382<br>FR 1998-873<br>FR 1998-3707<br>US 1998-82558<br>US 1997-69233P<br>US 1997-69750P<br>FR 1998-8777<br>US 1998-161092<br>EP 1998-946547<br>EP 2002-17134<br>US 1998-209961<br>US 1999-347594<br>US 1999-151564P<br>US 2000-583350<br>US 2000-680228<br>US 2001-784962<br>US 2001-884514<br>US 2001-935428<br>US 2002-334245 | 20030902<br>A 19971003<br>A 19980122<br>A 19980320<br>A2 19980521<br>P 19971211<br>P 19971216<br>A 19980706<br>A3 19980925<br>A3 19981001<br>A3 19981001<br>B1 19981210<br>A3 19990701<br>P 19990831<br>A2 20000531<br>B2 20001006<br>A2 20010216<br>A2 20010619<br>A1 20010820<br>A2 20021231 |

AB The invention relates to novel type II **porcine circovirus** strains isolated from pulmonary or ganglionic samples obtained from farms affected by the post-weaning multisystemic wasting syndrome (PMWS). It relates to purified preps. of these strains, conventional attenuated or inactivated vaccines, recombinant live vaccines, plasmid vaccines and subunit vaccines, as well as reagents (i.e. oligonucleotide probes/primers and antibodies) and diagnostic methods (e.g. hybridization, PCR, immunofluorescence, ELISA, etc.). It also relates to the DNA fragments which can be used for the production of subunits in an in vitro expression vector or as sequences to be integrated into a virus or plasmid type in vivo expression vector.

IT **111-01-3, Squalane**

RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(vaccines and diagnostic reagents for **porcine circoviruses** and post-weaning multisystemic wasting syndrome)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN

ED Entered STN: 16 May 1992

ACCESSION NUMBER: 1992:201083 CAPLUS

DOCUMENT NUMBER: 116:201083

TITLE: Inactivated **Mycoplasma hyopneumoniae**

bacterin and its use in vaccines

INVENTOR(S): Petersen, Gary R.; Dayalu, Krishnaswamy Iyengar

PATENT ASSIGNEE(S): Solvay Animal Health, Inc., USA

SOURCE: PCT Int. Appl., 57 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE       |
|---|------|----------|-----------------|------------|
| WO 9203157  | A1   | 19920305 | WO 1991-US5858  | 19910816   |
| W: AU, BR, CA, FI, HU, JP, KR, NO, RO, SU<br>RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE |      |          |                 |            |
| US 5565205  | A    | 19961015 | US 1990-568427  | 19900816   |
| CA 2089552  | AA   | 19920217 | CA 1991-2089552 | 19910816   |
| AU 9184923  | A1   | 19920317 | AU 1991-84923   | 19910816   |
| AU 643829   | B2   | 19931125 |                 |            |
| EP 550477   | A1   | 19930714 | EP 1991-915945  | 19910816   |
| EP 550477   | B1   | 19970423 |                 |            |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE   |      |          |                 |            |
| BR 9106748  | A    | 19930824 | BR 1991-6748    | 19910816   |
| JP 06503708   | T2   | 19940428 | JP 1991-515102  | 19910816   |
| JP 3040467  | B2   | 20000515 |                 |            |
| AT 151990   | E    | 19970515 | AT 1991-915945  | 19910816   |
| ES 2103827  | T3   | 19971001 | ES 1991-915945  | 19910816   |
| PRIORITY APPLN. INFO.:  |      |          | US 1990-568427  | A 19900816 |
|   |      |          | WO 1991-US5858  | A 19910816 |

AB A virulent *Mycoplasma hyopneumoniae* isolate is inactivated with binary ethylenimine (produced *in situ* from 2-bromoethylamine-HBr) to provide a vaccine against respiratory infections with *M. hyopneumoniae* in swine. Thus, 400 mL of a virulent culture was treated with 40 mL 2% NaHCO<sub>3</sub> to raise the pH to 7.5, followed by swirling with 0.33 g 2-bromoethylamine-HBr at 37° for 24 h and neutralizing with 0.5 g Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>. The vaccine, containing also 0.2% Carbopol and 0.005% thimerosal (preservative) was administered intratracheally to 1-wk-old pigs. Local secretory antibodies and/or cell-mediated immunity appeared more important than circulating antibodies in conferring protection.

(FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, JICST-EPLUS, JAPIO, CABA, AGRICOLA, VETU, VETB, PHIC, PHIN, TOXCENTER, DISSABS, PASCAL, FEDRIP'  
ENTERED AT 09:40:04 ON 22 DEC 2004)

L8 2 S L7  
L9 2 DUP REM L8 (0 DUPLICATES REMOVED)

L9 ANSWER 1 OF 2 WPIDS COPYRIGHT 2004 THE THOMSON CORP on STN  
ACCESSION NUMBER: 2004-625291 [60] WPIDS  
CROSS REFERENCE: 2002-666847 [71]  
DOC. NO. CPI: C2004-224828  
TITLE: Vaccine composition for immunizing animal against infection by *Mycoplasma hyopneumoniae* and viral pathogens, comprises *Mycoplasma hyopneumoniae* bacterin, viral antigen e.g. swine influenza virus, adjuvant mixture, and carrier.  
DERWENT CLASS: A96 B04 C06 D16  
INVENTOR(S): CHU, H; LI, W; XU, Z  
PATENT ASSIGNEE(S): (AMHP) WYETH  
COUNTRY COUNT: 103  
PATENT INFORMATION:

| PATENT NO | KIND | DATE | WEEK | LA | PG |
|-----------|------|------|------|----|----|
|-----------|------|------|------|----|----|

Searcher : Shears 571-272-2528

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 WO 2004058142 A2 20040715 (200460)\* EN 39  
 RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS  
 LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW  
 W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK  
 DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR  
 KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PH PL  
 PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU  
 ZA ZM ZW  
 AU 2003303129 A1 20040722 (200476)

## APPLICATION DETAILS:

| PATENT NO     | KIND | APPLICATION     | DATE     |
|---------------|------|-----------------|----------|
| WO 2004058142 | A2   | WO 2003-US15115 | 20030514 |
| AU 2003303129 | A1   | AU 2003-303129  | 20030514 |

## FILING DETAILS:

| PATENT NO     | KIND        | PATENT NO     |
|---------------|-------------|---------------|
| AU 2003303129 | A1 Based on | WO 2004058142 |

PRIORITY APPLN. INFO: US 2002-150597 20020517  
 AN 2004-625291 [60] WPIDS  
 CR 2002-666847 [71]  
 AB WO2004058142 A UPAB: 20041125  
 NOVELTY - A vaccine composition eliciting protective immunity against **Mycoplasma hyopneumoniae** comprises M. **hyopneumoniae** bacterin, viral antigen selected from **swine influenza virus**, **porcine reproductive and respiratory syndrome virus** and **porcine circovirus**, adjuvant mixture comprising acrylic acid polymer and mixture of metabolizable oil and **polyoxyethylene-polyoxypropylene block copolymer**, and carrier.  
 DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for protection of animal against diseases caused by M. **hyopneumoniae** and viral antigens, which involves administering the vaccine composition to the animal.  
 ACTIVITY - Antibacterial; Virucide. No biological data given.  
 MECHANISM OF ACTION - Vaccine. 33 (21-day **pigs**) were vaccinated with (2 ml, intramuscularly) vaccine containing **Mycoplasma hyopneumoniae** bacterin concentrate (60 v/v%). A control group **pigs** were not administered with the vaccine. 6 months following vaccination, 20 vaccinated **pigs** and 10 non-vaccinated control **pigs** were challenged with virulent **Mycoplasma hyopneumoniae** (1/ asterisk 106 microbes/**pig**). The vaccinated **pigs** had an average lung lesion score of 3.6% and control **pigs** had lung lesion score of 14.6%. The lung lesions in the vaccinated group were significantly less than the control group. Hence, concluded that the vaccine induced long term protective immunity against virulent **Mycoplasma hyopneumoniae**.  
 USE - For immunizing and protecting animal (e.g. **pig**) against infection by **Mycoplasma hyopneumoniae** and viral pathogen (claimed).

ADVANTAGE - The improved **Mycoplasma hyopneumoniae** bacterin vaccine induces protective immunity against infections/diseases caused by the organism with single administration. The vaccine elicits an immune response specific to **Mycoplasma hyopneumoniae** bacterin including cell-mediated immunity and local (secretory IgA) immunity.

Dwg.0/0

L9 ANSWER 2 OF 2 WPIDS COPYRIGHT 2004 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2002-666847 [71] WPIDS  
 CROSS REFERENCE: 2004-625291 [60]  
 DOC. NO. CPI: C2002-187160  
 TITLE: Vaccine for immunizing an animal against infection by **Mycoplasma hyopneumoniae** comprises **Mycoplasma hyopneumoniae** bacterin, acrylic acid polymer, metabolizable oil, a **polyoxyethylene-polypolypropylene** block copolymer, and a carrier.  
 DERWENT CLASS: A14 A25 A96 B04 C06 D16  
 INVENTOR(S): CHU, H; LI, W; XU, Z; CHU, H S  
 PATENT ASSIGNEE(S): (AMHP) WYETH; (AMHP) AMERICAN HOME PROD CORP  
 COUNTRY COUNT: 101  
 PATENT INFORMATION:

| PATENT NO   | KIND | DATE               | WEEK | LA | PG |
|---|------|--------------------|------|----|----|
| WO 2002049666   | A2   | 20020627 (200271)* | EN   | 27 |    |
| RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ |      |                    |      |    |    |
| NL OA PT SD SE SL SZ TR TZ UG ZM ZW                                   |      |                    |      |    |    |
| W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK  |      |                    |      |    |    |
| DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR     |      |                    |      |    |    |
| KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT     |      |                    |      |    |    |
| RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW     |      |                    |      |    |    |
| AU 2002028993   | A    | 20020701 (200271)  |      |    |    |
| US 2002131980   | A1   | 20020919 (200271)  |      |    |    |
| US 2003017171   | A1   | 20030123 (200310)  |      |    |    |
| EP 1343525  | A2   | 20030917 (200362)  | EN   |    |    |
| R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT  |      |                    |      |    |    |
| RO SE SI TR   |      |                    |      |    |    |
| KR 2003065556   | A    | 20030806 (200402)  |      |    |    |
| BR 2001016249   | A    | 20040302 (200419)  |      |    |    |
| CZ 2003001721   | A3   | 20040414 (200435)  |      |    |    |
| CN 1489472  | A    | 20040414 (200442)  |      |    |    |
| JP 2004518655   | W    | 20040624 (200442)  |      | 52 |    |
| HU 2004000687   | A2   | 20040628 (200452)  |      |    |    |
| MX 2003005357   | A1   | 20031101 (200468)  |      |    |    |

## APPLICATION DETAILS:

| PATENT NO     | KIND           | APPLICATION     | DATE     |
|---------------|----------------|-----------------|----------|
| WO 2002049666 | A2             | WO 2001-US47865 | 20011211 |
| AU 2002028993 | A              | AU 2002-28993   | 20011211 |
| US 2002131980 | A1 Provisional | US 2000-256637P | 20001219 |
|               |                | US 2002-39383   | 20020108 |
| US 2003017171 | A1 Provisional | US 2000-256637P | 20001219 |

|    |            | CIP of | US | 2002-39383   | 20020108 |
|----|------------|--------|----|--------------|----------|
| EP | 1343525    | A2     | US | 2002-150597  | 20020517 |
| KR | 2003065556 | A      | EP | 2001-990123  | 20011211 |
| BR | 2001016249 | A      | WO | 2001-US47865 | 20011211 |
| CZ | 2003001721 | A3     | KR | 2003-708293  | 20030619 |
| CN | 1489472    | A      | BR | 2001-16249   | 20011211 |
| JP | 2004518655 | W      | WO | 2001-US47865 | 20011211 |
| HU | 2004000687 | A2     | WO | 2001-US47865 | 20011211 |
| MX | 2003005357 | A1     | CZ | 2003-1721    | 20011211 |
|    |            |        | CN | 2001-822634  | 20011211 |
|    |            |        | WO | 2001-US47865 | 20011211 |
|    |            |        | JP | 2002-551004  | 20011211 |
|    |            |        | WO | 2001-US47865 | 20011211 |
|    |            |        | HU | 2004-687     | 20011211 |
|    |            |        | WO | 2001-US47865 | 20011211 |
|    |            |        | MX | 2003-5357    | 20030613 |

**FILING DETAILS:**

| PATENT NO     | KIND        | PATENT NO     |
|---------------|-------------|---------------|
| AU 2002028993 | A Based on  | WO 2002049666 |
| EP 1343525    | A2 Based on | WO 2002049666 |
| BR 2001016249 | A Based on  | WO 2002049666 |
| CZ 2003001721 | A3 Based on | WO 2002049666 |
| JP 2004518655 | W Based on  | WO 2002049666 |
| HU 2004000687 | A2 Based on | WO 2002049666 |
| MX 2003005357 | A1 Based on | WO 2002049666 |

PRIORITY APPLN. INFO: US 2000-256637P 20001219; US  
2002-39383 20020108; US  
2002-150597 20020517

AN 2002-666847 [71] WPIDS

CR 2004-625291 [60]

AB WO 200249666 A UPAB: 20041026

NOVELTY - Vaccine composition (I) for immunizing an animal against infection by **Mycoplasma hyopneumoniae** comprises **Mycoplasma hyopneumoniae** bacterin, a mixture of acrylic acid polymer, metabolizable oil and a **polyoxyethylene-polypropylene** block copolymer, and a carrier. The vaccine provides immunity from **Mycoplasma hyopneumoniae** after a single administration.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:  
(1) a method for protecting an animal against disease caused by

*Mycoplasma hyopneumoniae* by administering (I); and

(2) a vaccine comprising inactivated *Mycoplasma*

hyponeumoniae, a metabolizable oil, a **polyoxyethylene-polypropylene** block copolymer and an acrylic acid polymer in the form of an oil in water emulsion.

#### ACTIVITY - Antibacterial.

#### MECHANISM OF ACTION - Vaccine.

20 21-Day old **pigs** were vaccinated intramuscularly with 1 dose of a vaccine containing mycoplasma concentrate ( greater than 1 x 1010 MHDCE/ml). 10 **pigs** were not vaccinated (control) and 3 **pigs** were non-challenge environmental controls. All **pigs** were sero-negative at the time of vaccination indicating the animals were

susceptible to **M. hyopneumoniae**. 6 Months following vaccination, the 20 vaccinated **pigs** and 10 control **pigs** were challenged with virulent **M. hyopneumoniae** (1000000 organisms/**pig**). Vaccinated **pigs** had an average lung lesion score of 3.6 % and the control **pigs** a lung lesion score of 14.6 %. The results showed that the vaccine induced long term protective immunity against virulent **M. hyopneumoniae** after a single dose vaccination.

USE - Vaccine is useful for immunizing animals against infection by **Mycoplasma hyopneumoniae** (claimed).

Dwg.0/0

(FILE 'MEDLINE' ENTERED AT 09:41:33 ON 22 DEC 2004)

L10 120743 SEA FILE=MEDLINE ABB=ON PLU=ON SWINE/CT

L11 19 SEA FILE=MEDLINE ABB=ON PLU=ON "MYCOPLASMA HYOPNEUMONIAE"/CT

L12 17 SEA FILE=MEDLINE ABB=ON PLU=ON L10 AND L11

L12 ANSWER 1 OF 17 MEDLINE on STN

ACCESSION NUMBER: 2004560938 MEDLINE

DOCUMENT NUMBER: PubMed ID: 15532888

TITLE: A system response to an outbreak of enzootic pneumonia in grow/finish pigs.

AUTHOR: Bargen Leeanne E

CORPORATE SOURCE: Western College of Veterinary Medicine, University of Saskatchewan, 52 Campus Drive, Saskatoon, Saskatchewan S7N 5B4.

SOURCE: Canadian veterinary journal. La revue veterinaire canadienne, (2004 Oct) 45 (10) 856-9.  
Journal code: 0004653. ISSN: 0008-5286.

PUB. COUNTRY: Canada

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200412

ENTRY DATE: Entered STN: 20041110

Last Updated on STN: 20041220

Entered Medline: 20041202

ED Entered STN: 20041110

Last Updated on STN: 20041220

Entered Medline: 20041202

AB A Mycoplasma hyopneumoniae-negative commercial swine production system broke with enzootic pneumonia at their grow/finish site in southern Manitoba in October, 2003. System responses included feed medication, depopulation, delayed shipment of pigs to the infected site, vaccination of at risk sow herds, and disinfection when grow/finish site depopulation was completed.

L12 ANSWER 2 OF 17 MEDLINE on STN

ACCESSION NUMBER: 2004541382 MEDLINE

DOCUMENT NUMBER: PubMed ID: 15514274

TITLE: Decreased protein accretion in pigs with viral and bacterial pneumonia is associated with increased myostatin expression in muscle.

AUTHOR: Escobar Jeffery; Van Alstine William G; Baker David H; Johnson Rodney W

10/039383

CORPORATE SOURCE: Department of Animal Sciences, University of Illinois, Urbana, IL 61801, USA.  
SOURCE: Journal of nutrition, (2004 Nov) 134 (11) 3047-53.  
Journal code: 0404243. ISSN: 0022-3166.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200412  
ENTRY DATE: Entered STN: 20041030  
Last Updated on STN: 20041220  
Entered Medline: 20041209  
ED Entered STN: 20041030  
Last Updated on STN: 20041220  
Entered Medline: 20041209  
AB Chronic respiratory infections reduce growth in pigs but protein accretion (PA) during an ongoing multifactorial respiratory infection has not been determined, and the mechanisms underlying growth inhibition are largely unknown. The objectives of this study were to determine whether viral and bacterial pneumonia in young pigs decrease PA, increase serum IL-1beta and IL-6, and increase myostatin (MSTN) mRNA in biceps femoris and triceps muscles. *Mycoplasma hyopneumoniae* (Mh) or medium was given intratracheally at 4 wk of age, Porcine Reproductive and Respiratory Syndrome Virus (PRRSV) or medium was given intranasally at 6 wk of age, and pigs were killed 7 or 14 d after PRRSV inoculation for body composition analysis. PRRSV but not Mh induced a marked increase ( $P < 0.01$ ) in IL-1beta, IL-6, and MSTN mRNA and a decrease ( $P < 0.01$ ) in food intake, daily weight gain, PA, and lipid accretion. PRRSV also reduced ( $P < 0.01$ ) myofiber area in the biceps femoris. Food intake, weight gain, PA, and weight of biceps femoris and triceps muscles were negatively correlated ( $r = -0.4$  to  $-0.8$ ,  $P < 0.05$ ) with serum IL-1beta and IL-6 and with MSTN mRNA in muscle. These results suggest that the magnitude of increases in inflammatory cytokines during a respiratory infection may be predictive of decreases in PA and growth. They further suggest that during infection growth of skeletal muscle is limited in part by myostatin.

L12 ANSWER 3 OF 17 MEDLINE on STN  
ACCESSION NUMBER: 2004518357 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 15489423  
TITLE: The genome sequence of *Mycoplasma hyopneumoniae* strain 232, the agent of swine mycoplasmosis.  
AUTHOR: Minion F Chris; Lefkowitz Elliot J; Madsen Melissa L; Cleary Barbara J; Swartzell Steven M; Mahairas Gregory G  
CORPORATE SOURCE: Department of Veterinary Microbiology and Preventive Medicine, Iowa State University, Ames, IA 50011, USA..  
fcminion@iastate.edu  
SOURCE: Journal of bacteriology, (2004 Nov) 186 (21) 7123-33.  
Journal code: 2985120R. ISSN: 0021-9193.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
OTHER SOURCE: GENBANK-AE017332  
ENTRY MONTH: 200411  
ENTRY DATE: Entered STN: 20041019

10/039383

Last Updated on STN: 20041219  
Entered Medline: 20041124

ED    Entered STN: 20041019  
Last Updated on STN: 20041219  
Entered Medline: 20041124

AB    We present the complete genome sequence of *Mycoplasma hyopneumoniae*, an important member of the porcine respiratory disease complex. The genome is composed of 892,758 bp and has an average G+C content of 28.6 mol%. There are 692 predicted protein coding sequences, the average protein size is 388 amino acids, and the mean coding density is 91%. Functions have been assigned to 304 (44%) of the predicted protein coding sequences, while 261 (38%) of the proteins are conserved hypothetical proteins and 127 (18%) are unique hypothetical proteins. There is a single 16S-23S rRNA operon, and there are 30 tRNA coding sequences. The cilium adhesin gene has six paralogs in the genome, only one of which contains the cilium binding site. The companion gene, P102, also has six paralogs. Gene families constitute 26.3% of the total coding sequences, and the largest family is the 34-member ABC transporter family. Protein secretion occurs through a truncated pathway consisting of SecA, SecY, SecD, PrsA, DnaK, Tig, and LepA. Some highly conserved eubacterial proteins, such as GroEL and GroES, are notably absent. The DnaK-DnaJ-GrpR complex is intact, providing the only control over protein folding. There are several proteases that might serve as virulence factors, and there are 53 coding sequences with prokaryotic lipoprotein lipid attachment sites. Unlike other mycoplasmas, *M. hyopneumoniae* contains few genes with tandem repeat sequences that could be involved in phase switching or antigenic variation. Thus, it is not clear how *M. hyopneumoniae* evades the immune response and establishes a chronic infection.

L12    ANSWER 4 OF 17    MEDLINE on STN  
ACCESSION NUMBER:    2004386519    MEDLINE  
DOCUMENT NUMBER:    PubMed ID: 15288927  
TITLE:    Development of two real-time PCR assays for the detection of *Mycoplasma hyopneumoniae* in clinical samples.  
AUTHOR:    Dubosson Christoph R; Conzelmann Claudia; Miserez Raymond; Boerlin Patrick; Frey Joachim; Zimmermann Werner; Hani Hansjurg; Kuhnert Peter  
CORPORATE SOURCE:    Institute of Veterinary Bacteriology, University of Bern, Laenggass-Str. 122, CH-3001, Switzerland.  
SOURCE:    Veterinary microbiology, (2004 Aug 19) 102 (1-2) 55-65.  
Journal code: 7705469. ISSN: 0378-1135.  
PUB. COUNTRY:    Netherlands  
DOCUMENT TYPE:    Journal; Article; (JOURNAL ARTICLE)  
(VALIDATION STUDIES)  
LANGUAGE:    English  
FILE SEGMENT:    Priority Journals  
ENTRY MONTH:    200410  
ENTRY DATE:    Entered STN: 20040804  
Last Updated on STN: 20041022  
Entered Medline: 20041021

ED    Entered STN: 20040804  
Last Updated on STN: 20041022  
Entered Medline: 20041021

AB    In order to improve the diagnosis of enzootic pneumonia (EP) in pigs two real-time polymerase chain reaction (rtPCR) assays for the detection of *Mycoplasma hyopneumoniae* in bronchial swabs from lung necropsies were

established and validated in parallel. As a gold standard, the current "mosaic diagnosis" was taken, including epidemiological tracing, clinical signs, macro- and histopathological lesions of the lungs and immunofluorescence. One rtPCR is targeting a repeated DNA element of the *M. hyopneumoniae* genome (REP assay), the other a putative ABC transporter gene (ABC assay). Both assays were shown to be specific for *M. hyopneumoniae* and did not cross react with other bacteria and mollicutes from pig. With material from pigs of defined EP-negative farms the two assays showed to be 100% specific. When testing lungs from pig farms with EP, the REP assay detected 50% and the ABC assay 90% of the farms as positive. Both tests together detected all positive farms. Within a positive herd the two assays tested similarly with on average over 90% of the lung samples analysed from a single farm showing positive scores. A series of samples with suspicion of EP and samples from pigs with diseases other than respiratory taken from current routine diagnostic was assayed. None of the assays showed false positive results. The sensitivities in this sample group were 50% for the REP and 70% for the ABC assays and for both assays together 85%. The two assays run in parallel are therefore a valuable tool for the improvement of the current diagnosis of EP.

L12 ANSWER 5 OF 17 MEDLINE on STN  
 ACCESSION NUMBER: 2004381934 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 15285285  
 TITLE: Association between *Mycoplasma hyopneumoniae* at different respiratory sites and presence of histopathological lung lesions.  
 AUTHOR: Sibila M; Calsamiglia M; Segales J; Rosell C  
 CORPORATE SOURCE: Centre de Recerca en Sanitat Animal, Departament de Sanitat i d'Anatomia Animals, Facultat de Veterinaria, Universitat Autònoma de Barcelona, 08193 Bellaterra (Barcelona), Spain.  
 SOURCE: Veterinary record, (2004 Jul 10) 155 (2) 57-8.  
 Journal code: 0031164. ISSN: 0042-4900.  
 PUB. COUNTRY: England: United Kingdom  
 DOCUMENT TYPE: (EVALUATION STUDIES)  
 LANGUAGE: Journal; Article; (JOURNAL ARTICLE)  
 English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200408  
 ENTRY DATE: Entered STN: 20040803  
 Last Updated on STN: 20040827  
 Entered Medline: 20040826  
 ED Entered STN: 20040803  
 Last Updated on STN: 20040827  
 Entered Medline: 20040826

L12 ANSWER 6 OF 17 MEDLINE on STN  
 ACCESSION NUMBER: 2004334255 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 15236427  
 TITLE: Robust Bayesian prediction of subject disease status and population prevalence using several similar diagnostic tests.  
 AUTHOR: Evans Richard B; Erlandson Keith  
 CORPORATE SOURCE: Production Animal Medicine, College of Veterinary Medicine, Iowa State University, Ames, Iowa, USA.. revans@iastate.edu  
 SOURCE: Statistics in medicine, (2004 Jul 30) 23 (14) 2227-36.  
 Journal code: 8215016. ISSN: 0277-6715.

PUB. COUNTRY: England: United Kingdom  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200410  
 ENTRY DATE: Entered STN: 20040707  
                   Last Updated on STN: 20041022  
                   Entered Medline: 20041021  
 ED    Entered STN: 20040707  
       Last Updated on STN: 20041022  
       Entered Medline: 20041021  
 AB    Sometimes several diagnostic tests are performed on the same population of subjects with the aim of assessing disease status of individuals and the prevalence of the disease in the population, but no test is a reference test. Although the diagnostic tests may have the same biological underpinnings, test results may disagree for some specific animals. In that case, it may be difficult to determine disease status for individual subjects, and consequently population prevalence estimation becomes difficult. In this paper, we propose a robust method of estimating disease status and prevalence that uses heavy-tailed sampling distributions in a hierarchical model to protect against the influence of conflicting observations on inferences. If a subject has a test outcome that is discordant with the other test results then it is downweighted in diagnosing a subject's disease status, and for estimating disease prevalence. The amount of downweighting depends on the degree of conflict among the test results for the subject.  
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L12 ANSWER 7 OF 17        MEDLINE on STN  
 ACCESSION NUMBER: 2004238523        MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 15135987  
 TITLE: BF, HP, DQB and DRB are associated with haemolytic complement activity, acute phase protein reaction and antibody response in the pig.  
 AUTHOR: Wimmers Klaus; Schellander Karl; Ponsuksili Siriluck  
 CORPORATE SOURCE: Institute of Animal Breeding and Genetics, University of Bonn, Endenicher Allee 15, 53115 Bonn, Germany..  
                   wimmers@fbn-dummerstorf.de  
 SOURCE: Veterinary immunology and immunopathology, (2004 Jun) 99 (3-4) 215-28.  
                   Journal code: 8002006. ISSN: 0165-2427.  
 PUB. COUNTRY: Netherlands  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200408  
 ENTRY DATE: Entered STN: 20040512  
                   Last Updated on STN: 20040818  
                   Entered Medline: 20040817  
 ED    Entered STN: 20040512  
       Last Updated on STN: 20040818  
       Entered Medline: 20040817  
 AB    In order to examine the loci factor B (BF), C3, corticotropin releasing hormone (CRH), DQB, DRB, haptoglobin (HP) and transforming growth factor beta 1 (TGFB1) for association with traits of humoral, specific and unspecific defence F2-animals of a porcine resource family were genotyped

at single nucleotide polymorphisms within these loci. Haemolytic complement activity in the alternative and classical pathway, C3c and haptoglobin serum concentration and antibody titres were determined immediately prior and at days 4 and 10 after vaccinations against *Mycoplasma hyopneumoniae* (Mh), Aujeszky's disease virus, and porcine reproductive and respiratory syndrome virus at 6, 14 and 16 weeks of age, respectively. Analysis of variance revealed association of BF, HP and DRB with C3c serum concentration. The trend of haemolytic complement activity and C3c serum concentration during the experiment was affected by the interaction of DQB genotype and time of measurement. Association with antibody titres were found for BF, DQB and DRB. Results of the mixed model analyses were confirmed by quantitative transmission disequilibrium test that showed linkage and association with antibody titres, complement activity and acute phase reaction at certain times of measurement. The findings promote the importance of the candidate genes for humoral mechanisms of unspecific and specific defence that provide natural resistance against many pathogens.

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L12 ANSWER 8 OF 17 MEDLINE on STN  
 ACCESSION NUMBER: 2004203197 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 15099713  
 TITLE: Intra-unit correlations in seroconversion to *Actinobacillus pleuropneumoniae* and *Mycoplasma hyopneumoniae* at different levels in Danish multi-site pig production facilities.  
 AUTHOR: Vigre Hakan; Dohoo Ian R; Stryhn Henrik; Busch Marie Erika  
 CORPORATE SOURCE: Danish Institute for Food and Veterinary Research, Copenhagen V, Denmark.. hvi@dfvf.dk  
 SOURCE: Preventive veterinary medicine, (2004 Apr 30) 63 (1-2) 9-28.  
 Journal code: 8217463. ISSN: 0167-5877.  
 PUB. COUNTRY: Netherlands  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200409  
 ENTRY DATE: Entered STN: 20040422  
 Last Updated on STN: 20040910  
 Entered Medline: 20040909  
 ED Entered STN: 20040422  
 Last Updated on STN: 20040910  
 Entered Medline: 20040909  
 AB In this paper, multilevel logistic models which take into account the multilevel structure of multi-site pig production were used to estimate the variances between pigs produced in Danish multi-site pig production facilities regarding seroconversion to *Actinobacillus pleuropneumoniae* serotype 2 (Ap2) and *Mycoplasma hyopneumoniae* (Mh). Based on the estimated variances, three newly described computational methods (model linearisation, simulation and linear modelling) and the standard method (latent-variable approach) were used to estimate the correlations (intra-class correlation components, ICCs) between pigs in the same production unit regarding seroconversion. Substantially different values of ICCs were obtained from the four methods. However, ICCs obtained by the simulation and the model linearisation were quite consistent. Data used for estimation were collected from 1161 pigs from 429 litters reared in 36 batches at six Danish multi-site farms chronically infected with the

agents. At the farms, weaning age was 3-4.5 weeks, after which batches of pigs were reared using all-in/all-out management by room. Blood samples were collected shortly before weaning, transfer from weaning-site to finishing-site, and sending the first pigs in the batch for slaughter (third sampling). Few pigs seroconverted at the weaning-sites, whereas considerable variation in seroconversion was observed at the finishing-sites. Multilevel logistic models (initially including four levels: farm, batch, litter, pig) were used to decompose the variation in seroconversion at the finishing-site. However, there was essentially no clustering at the litter level-leading to the use of three-level models. In the case of Ap2, clustering within batch was so high that the data eventually were reduced to two levels (farm, batch). For seroconversion to Ap2, ICC between pigs within batches was approximately 90%, whereas the ICC between pigs within batches for Mh was approximately 40%. This indicates that the possibility for Mh to spread between pigs within batches is lower than for Ap2. The diversity in seroconversion between batches within the same farm was large for Ap2 (ICC approximately 10%), whereas there was a relative strongly ICC (approximately 50%) between batches for Mh. This indicates that the transmission of Mh is more consistent within a farm, whereas the presence of Ap2 varies between batches within a farm.

L12 ANSWER 9 OF 17 MEDLINE on STN  
 ACCESSION NUMBER: 2004160863 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 15053934  
 TITLE: Immunohistochemical labelling of cytokines in lung lesions of pigs naturally infected with *Mycoplasma hyopneumoniae*.  
 AUTHOR: Rodriguez F; Ramirez G A; Sarradell J; Andrada M; Lorenzo H  
 CORPORATE SOURCE: Department of Comparative Pathology, Veterinary Faculty, University of Las Palmas de Gran Canaria, Trasmontana s/n, 35416 Arucas, Gran Canaria, Spain.  
 SOURCE: Journal of comparative pathology, (2004 May) 130 (4) 306-12.  
 Journal code: 0102444. ISSN: 0021-9975.  
 PUB. COUNTRY: England: United Kingdom  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200411  
 ENTRY DATE: Entered STN: 20040401  
 Last Updated on STN: 20041117  
 Entered Medline: 20041116  
 ED Entered STN: 20040401  
 Last Updated on STN: 20041117  
 Entered Medline: 20041116  
 AB *Mycoplasma hyopneumoniae* (Mh) is the primary agent of porcine enzootic pneumonia (PEN), a chronic respiratory disease endemic to pig farms, and characterized histologically by infiltration of mononuclear cells in airways and prominent hyperplasia of the bronchus-associated lymphoid tissue (BALT). To gain further insight into the pathogenesis of PEN, cytokine expression in the lung, with particular attention to the BALT, was examined immunohistochemically in pigs naturally infected with Mh. An increase ( $P < 0.05$ ) in proinflammatory and immunoregulatory cytokines (especially interleukin [IL]-2, IL-4 and tumour necrosis factor [TNF]-alpha, and to a lesser extent IL-1 [alpha and beta] and IL-6) was detected in the BALT, which showed intense lymphoid hyperplasia. IL-1beta

and TNF-alpha were also detected in the bronchoalveolar exudate of infected pigs, and IL-6 and IL-8 were demonstrated in mononuclear cells of the alveolar septa. The results showed that in Mh infection, macrophage and lymphocyte activation results in the expression of a number of cytokines capable of inducing lung lesions and lymphoreticular hyperplasia of the BALT.

L12 ANSWER 10 OF 17 MEDLINE on STN  
 ACCESSION NUMBER: 2004144819 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 15036530  
 TITLE: Experimental dual infection of pigs with an H1N1 swine influenza virus (A/Sw/Hok/2/81) and *Mycoplasma hyopneumoniae*.  
 AUTHOR: Yazawa Shigeto; Okada Munenori; Ono Masaaki; Fujii Seiichi; Okuda Yo; Shibata Isao; Kida Hiroshi  
 CORPORATE SOURCE: Zen-noh Institute of Animal Health, 7 Ohja-machi, Sakura, Chiba 285-0043, Japan.. [yazawas@zk.zennoh.or.jp](mailto:yazawas@zk.zennoh.or.jp)  
 SOURCE: Veterinary microbiology, (2004 Mar 5) 98 (3-4) 221-8.  
 Journal code: 7705469. ISSN: 0378-1135.  
 PUB. COUNTRY: Netherlands  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200405  
 ENTRY DATE: Entered STN: 20040324  
 Last Updated on STN: 20040521  
 Entered Medline: 20040520  
 ED Entered STN: 20040324  
 Last Updated on STN: 20040521  
 Entered Medline: 20040520  
 AB Dual infection of pigs with swine influenza virus (SIV) and *Mycoplasma hyopneumoniae* was carried out to compare the clinical and pathological effects of dual infection in caesarian derived and colostrums deprived (CDCD) pigs, with that of a single infection with *M. hyopneumoniae*. In Experiment 1, 40-day-old CDCD pigs were inoculated only with SIV (A/Sw/Hok/2/81, H1N1). The virus was isolated from nasal swabs for 5-6 days. None of these pigs showed clinical signs of infection throughout the experimental period. These results suggested that this strain can infect pigs but is only slightly pathogenic when it is inoculated singly to a CDCD pig. In Experiment 2, 60-day-old CDCD pigs were inoculated with *M. hyopneumoniae* and then were inoculated with SIV (A/Sw/Hok/2/81) at 1 week (MHYO-7d-SIV-7d group) or 3 weeks (MHYO-21d-SIV-7d group) after *M. hyopneumoniae* inoculation. Macroscopically, dark red-to-purple lung lesions were observed in all of pigs at 14 or 28 days post-inoculation. Percentages of dark red-to-purple lung lesions in dual infection groups (MHYO-7d-SIV-7d group: 18.7 +/- 4.2%, MHYO-21d-SIV-7d group: 23.0 +/- 8.0%) were significantly ( $P < 0.05$ ) increased compared to those of each control group in which pigs were inoculated only with *M. hyopneumoniae* (MHYO-14d group: 4.7 +/- 2.9%, MHYO-28 group: 3.3 +/- 2.4%). Microscopically, bronchial epithelial lesions (epithelial disruption, degeneration, hyperplasia and formation of microabscess) were frequently observed in dark red-to-purple lung lesions of only the dual infection groups. These results demonstrate that the lung lesion of pigs inoculated with *M. hyopneumoniae* and SIV is more severe than that of pigs inoculated only with *M. hyopneumoniae*.

L12 ANSWER 11 OF 17 MEDLINE on STN  
 ACCESSION NUMBER: 2004089703 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 14979438  
 TITLE: Antibody response in sows and piglets following vaccination against *Mycoplasma hyopneumoniae*, toxigenic *Pasteurella multocida*, and *Actinobacillus pleuropneumoniae*.  
 AUTHOR: Kristensen Charlotte S; Andreasen Margit; Ersboll Annette K; Nielsen Jens P  
 CORPORATE SOURCE: Department of Clinical Studies, The Royal Veterinary and Agricultural University.. csk@danishmeat.dk  
 SOURCE: Canadian journal of veterinary research = Revue canadienne de recherche veterinaire, (2004 Jan) 68 (1) 66-70.  
 Journal code: 8607793. ISSN: 0830-9000.  
 PUB. COUNTRY: Canada  
 DOCUMENT TYPE: (CLINICAL TRIAL)  
 Journal; Article; (JOURNAL ARTICLE)  
 (RANDOMIZED CONTROLLED TRIAL)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200405  
 ENTRY DATE: Entered STN: 20040225  
 Last Updated on STN: 20040510  
 Entered Medline: 20040507  
 ED Entered STN: 20040225  
 Last Updated on STN: 20040510  
 Entered Medline: 20040507  
 AB The aim of the experimental study was to compare the humoral immune response and occurrence of adverse effects following single or multiple simultaneous vaccination of sows against *Mycoplasma hyopneumonia*, toxigenic *Pasteurella multocida*, and *Actinobacillus pleuropneumoniae*. In addition, passively transferred antibodies to piglets were studied until weaning at 3 weeks of age. Fever was seen in a few sows within the first 12 hours after the 1st and 2nd vaccination. No difference in the occurrence of other adverse effects was observed between groups. Antibody levels were significantly higher in vaccinated sows and their offspring compared with the control group. This was found to be independent of single or simultaneous vaccinations with the 3 vaccines. In conclusion, applying multiple vaccines simultaneously to sows appeared not to influence the occurrence of adverse effects or the sow's serum levels of antibodies at the time of farrowing, nor the offspring's serum levels up to 3 weeks of age.

L12 ANSWER 12 OF 17 MEDLINE on STN  
 ACCESSION NUMBER: 2004089695 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 14979430  
 TITLE: Dynamics of *Mycoplasma hyopneumoniae* infection in 12 farms with different production systems.  
 AUTHOR: Sibila Marina; Calsamiglia Maria; Vidal Dolors; Badiella Llorenc; Aldaz Alvaro; Jensen Jens C  
 CORPORATE SOURCE: Centre de Recerca en Sanitat Animal, Edifici V, Campus de Bellaterra, UAB 08193, Bellaterra, Barcelona, Spain.  
 SOURCE: Canadian journal of veterinary research = Revue canadienne de recherche veterinaire, (2004 Jan) 68 (1) 12-8.  
 Journal code: 8607793. ISSN: 0830-9000.  
 PUB. COUNTRY: Canada  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

(MULTICENTER STUDY)

LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200405  
ENTRY DATE: Entered STN: 20040225  
Last Updated on STN: 20040510  
Entered Medline: 20040507

ED      Entered STN: 20040225  
          Last Updated on STN: 20040510.  
          Entered Medline: 20040507

AB This study had 2 objectives: 1) to determine the involvement of *Mycoplasma hyopneumoniae* in respiratory outbreaks in herds of pigs, with the use of a nested polymerase chain reaction (nPCR) and an enzyme-linked immunosorbent assay (ELISA); and 2) to determine if the dynamics of *M. hyopneumoniae* infection differ between 3-site versus 1- or 2-site production systems (in which at least farrowing/gestation and nursery pigs are on the same site). Animals of different ages from 12 Spanish farms with respiratory problems were randomly sampled. Blood samples and nasal swabs were collected in a single farm visit, and ELISA and nPCR tests, respectively, were performed. All the farms demonstrated *M. hyopneumoniae*. According to the proportions of infected animals and the appearance of clinical signs in the different age groups, the farms were divided into 2 groups: farms in which *M. hyopneumoniae* probably played an important role in the observed respiratory outbreak and farms in which *M. hyopneumoniae* was not the main agent involved in the outbreak. Although seroconversion occurred in most herds in the finishing units, the number of seropositive pigs in the first group of farms was greater than the number in the second group. Statistically significant differences ( $P < 0.0001$ ) between farms with a 1- or 2-site production system versus those with a 3-site production system were detected in nPCR results but not in rates of seroconversion. The farm effect also had a great influence on both controlled parameters: the pathogen's DNA and antibody detection. Thus, although *M. hyopneumoniae* was present in all the studied farms, there were significant differences in the infection dynamics and clinical implications according to the type of production system, and *M. hyopneumoniae* colonization and seroconversion were greatly influenced by the effect of the individual farm.

L12 ANSWER 13 OF 17 MEDLINE on STN

ACCESSION NUMBER: 2004042614 MEDLINE

DOCUMENT NUMBER: PubMed ID: 14741128

**TITLE:** Porcine circovirus-2 and concurrent infections in the field.

AUTHOR: Ellis J; Clark E; Haines D; West K; Krakowka S; Kennedy S;  
Allan G M

CORPORATE SOURCE: Department of Veterinary Microbiology, Western College of Veterinary Medicine, University of Saskatchewan, 52 Campus Drive, Saskatoon, Sask., Canada S7N 5B4..

SOURCE: John.ellis@usask.ca  
Veterinary microbiology, (2004 Feb 4) 98 (2) 159-63. Ref:  
25  
Journal code: 7705469. ISSN: 0378-1135.

PUB COUNTRY: **Netherlands**

FROM: COUNTRY: Netherlands  
DOCUMENT TYPE: Journal: Ar

DOCUMENT TYPE: Journal Article; (REVIEW, TUTORIAL)  
General Review; (REVIEW)  
(REVIEW, TUTORIAL)

LANGUAGE: English

FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200405  
 ENTRY DATE: Entered STN: 20040127  
                   Last Updated on STN: 20040506  
                   Entered Medline: 20040505  
 ED    Entered STN: 20040127  
       Last Updated on STN: 20040506  
       Entered Medline: 20040505  
 AB    Porcine circovirus-2 (PCV-2) is the necessary cause of post-weaning multisystemic wasting syndrome (PMWS) in swine; however, a variety of co-factors, including other infectious agents, are thought to be necessary in the full expression of disease. Porcine parvovirus (PPV) was found in the inoculum used in the first experiments to reproduce PMWS in gnotobiotic swine. Retrospective and prospective studies in the field and laboratory have demonstrated PCV-2 can act synergistically with PPV to enhance the severity of PMWS. PCV-2 has been shown to play a role in the porcine infectious disease complex (PRDC). Other co-infecting agents with PCV-2 in the lung include, porcine reproductive and respiratory syndrome virus (PRRSV), swine influenza virus (SIV) and *Mycoplasma hyopneumoniae*. Exposure of pregnant sows to PPV, PRRSV, or encephalomyocarditis virus may interact with PCV-2 infected foetuses. The severity of hepatic lesions in PCV-2 infected pigs may be enhanced by co-infection with agents such as swine hepatitis E virus and *Aujeszky's* disease virus. Additional studies are required to determine the mechanistic basis for the interaction of PCV-2 with other agents in the pathogenesis of the various clinical syndromes that have been associated with PCV-2 infection.

L12 ANSWER 14 OF 17        MEDLINE on STN  
 ACCESSION NUMBER: 2003576153        MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 14654289  
 TITLE: Evaluation of virulence of *Mycoplasma hyopneumoniae* field isolates.  
 AUTHOR: Vicca J; Stakenborg T; Maes D; Butaye P; Peeters J; de Kruif A; Haesebrouck F  
 CORPORATE SOURCE: Department of Reproduction, Obstetrics and Herd Health,  
                   Faculty of Veterinary Medicine, Ghent University,  
                   Salisburylaan 133, 9820 Merelbeke, Belgium..  
                   j.vicca@rug.ac.be  
 SOURCE: Veterinary microbiology, (2003 Dec 30) 97 (3-4) 177-90.  
                   Journal code: 7705469. ISSN: 0378-1135.  
 PUB. COUNTRY: Netherlands  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200403  
 ENTRY DATE: Entered STN: 20031216  
                   Last Updated on STN: 20040323  
                   Entered Medline: 20040322

ED    Entered STN: 20031216  
       Last Updated on STN: 20040323  
       Entered Medline: 20040322  
 AB    The course of enzootic pneumonia, caused by *Mycoplasma hyopneumoniae*, is strongly influenced by management and housing conditions. Other factors, including differences in virulence between *M. hyopneumoniae* strains, may also be involved. The aim of this study was to evaluate the virulence of six *M. hyopneumoniae* field isolates and link it to genetic differences as

determined by randomly amplified polymorphic DNA (RAPD) analysis. Ninety, conventional *M. hyopneumoniae*-free piglets were inoculated intratracheally with the field isolates, a virulent reference strain or sterile culture medium. Animals were examined daily for the presence of disease signs and a respiratory disease score (RDS) was assessed per pig. Twenty-eight days post infection, pigs were euthanized, blood sampled and a lung lesion score was given. Lung samples were processed for histopathology, immunofluorescence testing for *M. hyopneumoniae* and isolation of *M. hyopneumoniae*. RAPD analysis was performed on all *M. hyopneumoniae* strains. Significant differences between isolates were found for the RDS, lung lesion score, histopathology, immunofluorescence and serology. Based on the results of the different parameters, isolates were divided into three "virulence" groups: low, moderately and highly virulent strains. Typically, a 5000 bp RAPD fragment was associated with the highly and moderately virulent strains whereas it was absent in low virulent strains. It was concluded that high variation in virulence exists between *M. hyopneumoniae* strains isolated from different swine herds. Further studies are required to determine whether the 5000 bp fragment obtained in the RAPD analysis can be used as a virulence marker.

L12 ANSWER 15 OF 17 MEDLINE on STN  
 ACCESSION NUMBER: 2003519422 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 14597175  
 TITLE: The pyruvate dehydrogenase complex of *Mycoplasma hyopneumoniae* contains a novel lipoyl domain arrangement.  
 AUTHOR: Matic Jake N; Wilton Jody L; Towers Rebecca J; Scarman Anthony L; Minion F Chris; Walker Mark J; Djordjevic Steve P  
 CORPORATE SOURCE: Microbiology and Immunology Section, Elizabeth Macarthur Agricultural Institute, Private Mail Bag 8, Camden, NSW, Australia.  
 SOURCE: Gene, (2003 Nov 13) 319 99-106.  
 Journal code: 7706761. ISSN: 0378-1119.  
 PUB. COUNTRY: Netherlands  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 OTHER SOURCE: GENBANK-AF443780; GENBANK-AY061947; GENBANK-AY061948  
 ENTRY MONTH: 200401  
 ENTRY DATE: Entered STN: 20031105  
 Last Updated on STN: 20040121  
 Entered Medline: 20040120  
 ED Entered STN: 20031105  
 Last Updated on STN: 20040121  
 Entered Medline: 20040120  
 AB The genes encoding the pyruvate dehydrogenase (PDH) complex (*pdhA*, *pdhB*, *pdhC* and *pdhD*) from *Mycoplasma hyopneumoniae* have been cloned and sequenced. The genes are arranged into two operons, designated *pdhAB* and *pdhCD*, which are not found together in the chromosome. The *pdhA*, *pdhB*, *pdhC* and *pdhD* genes encode proteins of predicted molecular masses of 44.2 kDa (pyruvate dehydrogenase major subunit; Elalpha), 36.6 kDa (pyruvate dehydrogenase minor subunit; Elbeta), 33.1 kDa (dihydrolipoyl acetyltransferase; E2) and 66.3 kDa (dihydrolipoyl dehydrogenase; E3), respectively. Sequence analysis of the *pdhCD* operon revealed the presence of a lipoyl-binding domain in *pdhD* but not in *pdhC*. The lipoyl domain is believed to act as a "swinging arm" that spans the gaps between the

catalytic domains of each of the subunits. Portions of the N-terminal regions of pdhA and pdhD were expressed as 6xHis-tag fusion proteins in *Escherichia coli* and purified by nickel affinity chromatography. The purified proteins were used to raise antibodies in rabbits, and Western blot analysis was performed with the polyclonal rabbit antiserum. Both the pdhA and pdhD genes were expressed among various strains of *M. hyopneumoniae* as well as the porcine mycoplasmas, *Mycoplasma hyorhinis* and *Mycoplasma flocculare*. Southern hybridisation analysis using probes from pdhA and pdhD detected one copy of each gene in the chromosome of *M. hyopneumoniae*. Since previous studies have shown pyruvate dehydrogenase activity in *M. hyopneumoniae* [J. Gen. Microbiol. 134 (1988) 791], it appears likely that a functional lipoyl-binding domain in the N terminus of PdhC is not an absolute prerequisite for pyruvate dehydrogenase enzyme activity. We hypothesise that the lipoyl-binding domain of PdhD is performing the enzymatic function normally attributed to the PdhC lipoyl-binding domain in other organisms. Searches of pyruvate dehydrogenase gene sequences derived from other *Mycoplasma* species showed that a putative lipoyl domain was absent in the pdhC gene from *Mycoplasma pulmonis*. However, like other bacterial species, pdhC gene sequences from *Mycoplasma capricolum*, *Mycoplasma genitalium* and *Mycoplasma pneumoniae* contain a putative lipoyl domain.

L12 ANSWER 16 OF 17 MEDLINE on STN  
 ACCESSION NUMBER: 2003509582 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 14585198  
 TITLE: Porcine TLR2 and TLR6: identification and their involvement in *Mycoplasma hyopneumoniae* infection.  
 AUTHOR: Muneta Yoshihiro; Uenishi Hirohide; Kikuma Reiko; Yoshihara Kazuhiro; Shimoji Yoshihiro; Yamamoto Ryuji; Hamashima Noriyuki; Yokomizo Yuichi; Mori Yasuyuki  
 CORPORATE SOURCE: Department of Immunology, National Institute of Animal Health, Tsukuba, Ibaraki 305-0856, Japan.. ymuneta@affrc.go.jp  
 SOURCE: Journal of interferon & cytokine research : official journal of the International Society for Interferon and Cytokine Research, (2003 Oct) 23 (10) 583-90. Journal code: 9507088. ISSN: 1079-9907.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200406  
 ENTRY DATE: Entered STN: 20031031  
                   Last Updated on STN: 20040606  
                   Entered Medline: 20040604  
 ED    Entered STN: 20031031  
       Last Updated on STN: 20040606  
       Entered Medline: 20040604  
 AB    We successfully cloned and sequenced porcine toll-like receptor (TLR2) and TLR6 cDNA from porcine alveolar macrophages stimulated with 10 microg/ml lipopolysaccharide (LPS). The open reading frames (ORFs) of the porcine TLR2 and TLR6 cDNA were shown to be 2358 and 2391 bp in length and to encode 785 and 796 amino acids, respectively. The predicted amino acid sequence of porcine TLR2 was 72.3% homologous to human TLR2 and 61.0% homologous to murine TLR2. That of porcine TLR6 was 74.4% homologous to human TLR6 and 66.1% homologous to murine TLR6. Porcine TLR2 and TLR6

genes were both mapped to porcine chromosome 8 (TLR2: SSC8q21.1 --> 21.5; TLR6: SSC8p11.1 --> p21.1) by fluorescence in situ hybridization (FISH) and radiation hybrid mapping. Western blot analysis confirmed that TLR2 and TLR6 proteins were both expressed in porcine alveolar macrophages. Further, antiporcine TLR2 and TLR6 antibodies synergistically blocked tumor necrosis factor-alpha (TNF-alpha) production by porcine alveolar macrophages stimulated with *Mycoplasma hyopneumoniae*. These results indicated that both TLR2 and TLR6 are important in the recognition of *M. hyopneumoniae* in porcine alveolar macrophages and will be useful in understanding innate immunity against *M. hyopneumoniae*.

L12 ANSWER 17 OF 17 MEDLINE on STN  
 ACCESSION NUMBER: 2003217192 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 12738649  
 TITLE: Monoclonal antibodies to *Escherichia coli*-expressed P46 and P65 membranous proteins for specific immunodetection of *Mycoplasma hyopneumoniae* in lungs of infected pigs.  
 AUTHOR: Cheikh Saad Bouh K; Shareck F; Dea S  
 CORPORATE SOURCE: INRS-Institut Armand-Frappier, Universite du Quebec, Laval, Quebec, Canada, H7V 1B.  
 SOURCE: Clinical and diagnostic laboratory immunology, (2003 May) 10 (3) 459-68.  
 Journal code: 9421292. ISSN: 1071-412X.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200403  
 ENTRY DATE: Entered STN: 20030513  
 Last Updated on STN: 20040317  
 Entered Medline: 20040316  
 ED Entered STN: 20030513  
 Last Updated on STN: 20040317  
 Entered Medline: 20040316  
 AB The P46 and P65 proteins of *Mycoplasma hyopneumoniae* are two membranous proteins carrying species-specific antigenic determinants. Based on the genomic sequence of the reference strain ATCC 25934, primers were designed for PCR amplification of the genes encoding entire P46 (1,260 bp) and P65 (1,803 bp) and N-terminally truncated P65(c) (1,200 bp). These primers were shown to be specific to *M. hyopneumoniae* since no DNA amplicons could be obtained with other mycoplasma species that commonly colonize the porcine respiratory tract. Both amplified genes were then cloned into the pGEX-4T-1 vector to be expressed in *Escherichia coli* cells as recombinant fusion proteins with glutathione S-transferase (GST). Prior to generation of expression constructs, TGA nonsense codons, exceptionally used for tryptophan residues by *M. hyopneumoniae*, had been converted to TGG codons by PCR-directed mutagenesis. Following induction by IPTG (isopropyl-beta-D-thiogalactopyranoside), both GST-P46 and GST-P65(c) recombinant fusion proteins were recovered by disrupting transformed cells by sonication, purified by affinity chromatography, and then cut with thrombin to release the P46 and P65(c) moieties. The enriched *E. coli*-expressed P46 and P65c proteins were used to immunize female BALB/c mice for the generation of anti-P46 and anti-P65(c) monoclonal antibodies (MAbs). The polypeptide specificities of MAbs obtained was confirmed by Western blotting with cell lysates prepared from the homologous strain. Cross-reactivity study of the anti-P46 and anti-P65(c) MAbs towards two

10/039383

other *M. hyopneumoniae* reference strains (ATCC 25095 and J strains) and Quebec field strains that had been isolated in culture, suggested that the MAbs obtained against both membranous proteins were directed against highly conserved species-specific epitopes. No reactivity to other mycoplasma species tested was demonstrated. Clinical signs and lesions suggestive of enzootic pneumonia were reproduced in specific-pathogen-free pigs that had been inoculated intratracheally with a virulent Quebec field strain (IAF-DM9827) of *M. hyopneumoniae*. Both anti-P46 and anti-P65(c) MAbs permitted effective detection by indirect immunofluorescence and indirect immunoperoxidase assay of *M. hyopneumoniae* in, respectively, frozen and formalin-fixed, paraffin-embedded lung sections from pigs that were killed after the 6- to 7-week observation period.

FILE 'HOME' ENTERED AT 09:42:39 ON 22 DEC 2004

Devi, S.  
10/039383

10/039383

22dec04 09:47:05 User219783 Session D2077.2

SYSTEM:OS - DIALOG OneSearch  
File 65:Inside Conferences 1993-2004/Dec W3  
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File 440:Current Contents Search(R) 1990-2004/Dec 22  
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File 348:EUROPEAN PATENTS 1978-2004/Dec W02  
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\*File 113: This file is closed (no updates)

| Set | Items | Description   |
|-----|-------|---|
| S1  | 647   | (PORCINE OR PIG OR HOG OR SWINE) AND ((MYCOPLASM? OR M) (W) - HYOPNEUMON?)                  |
| S2  | 8     | S1 AND (SQUALANE OR PLURONIC(W) ("L121" OR "L 121") OR CARBOPOL)                            |
| S3  | 6     | S1 AND (POLYOXYETHYLENE OR POLY(W) (OXYETHYLENE OR OXY(W) ETHYLENE) OR POLYOXY(W) ETHYLENE) |
| S4  | 13    | S2 OR S3  |
| S5  | 13    | RD (unique items)   |

>>>No matching display code(s) found in file(s): 65, 113

5/3,AB/1 (Item 1 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS  
(c) 2004 European Patent Office. All rts. reserv.

01691650  
Method for the in vitro diagnosis of type II **porcine** circovirus infection and diagnostic reagents  
Verfahren zur in vitro-Diagnose von Infektionen durch Schweinecircovirus vom Typ II und diagnostische Reagenzien  
Methode de diagnostic in vitro de l'infection par le circovirus porcin de type II et reactifs de diagnostic  
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Mc Neilly, Francis, 4 Lisleen Place, Newtownards BT3 4NH, (GB)

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PATENT (CC, No, Kind, Date): EP 1386617 A1 040204 (Basic)

APPLICATION (CC, No, Date): EP 2003016998 981001;

PRIORITY (CC, No, Date): FR 9712382 971003; FR 98873 980122; FR 983707  
980320

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;  
LU; MC; NL; PT; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 1281760 (EP 2002017134)

EP 1019510 (EP 2098946547)

INTERNATIONAL PATENT CLASS: A61K-039/12; A61K-039/42; C07K-016/08;  
C07K-014/01; G01N-033/53; C12Q-001/68

ABSTRACT EP 1386617 A1 (Translated)

New type II **porcine** circovirus

A purified preparation of type II **porcine** circovirus (PCV).

Independent claims are also included for the following: (a) preparation of PCV (i) isolated from a physiological or tissue sample, particularly from a lesion, from a **pig** with symptoms of PMWS (**porcine** multisystemic wasting syndrome); or (ii) produced by, and isolated from, in vitro cell cultures infected with the virus of (i); (b) extract or culture supernatant, or antigen preparation, optionally purified, collected from in vitro cultures of cells infected with PCV; (c) vaccine containing the products of (b); (d) DNA fragments (A) of 1767 bp (1), 1767 bp (2), 1767 bp (3), 1768 bp (4) or 1768 bp (6), or containing an open reading frame (ORF) of PCV; (e) polypeptides (I) encoded by (A) or these ORF; (f) in vitro expression vector containing (A), or these ORFs; (g) polypeptides (Ia), optionally purified, expressed from the vector of (f); (h) subunit vaccine containing at least one (I) or (Ia), diluent or vehicle and optionally an adjuvant; (i) in vivo expression vector, integrated into a genome, containing (A) or the ORFs; (j) live or plasmid vaccine containing the vector of (j), and a diluent or vehicle; (k) probe or primer containing all or part of (A) or the ORFs; (l) mono- or poly-clonal antibodies raised against PCV, (I), (Ia) or their fragments; and (m) detection of PCV by identifying in a body fluid or tissue sample an antigen or antibody specific for the antigen.

TRANSLATED ABSTRACT WORD COUNT: 247

ABSTRACT EP 1386617 A1

L'invention concerne des souches de circovirus porcins isolees a partir de prelevements pulmonaires ou ganglionnaires provenant d'elevage atteints par le syndrome de deperissement generalise de post-sevrage (en anglais PMWS). Elle concerne des preparations purifiees de ces souches, des vaccins classiques attenues ou inactives, des vaccins vivants recombinants, des vaccins plasmidiques et des vaccins de sous-unites, ainsi que des reactifs et methodes de diagnostic. Elle concerne aussi des fragments d'ADN pouvant etre utilises pour la production de sous-unites dans un vecteur d'expression in vitro ou comme sequences a integrer dans un vecteur d'expression in vivo de type virus ou plasmide.

ABSTRACT WORD COUNT: 100

LANGUAGE (Publication,Procedural,Application): French; French; French  
 FULLTEXT AVAILABILITY:

| Available Text                     | Language | Update | Word Count |
|------------------------------------|----------|--------|------------|
| CLAIMS A                           | (French) | 200406 | 792        |
| SPEC A                             | (French) | 200406 | 7575       |
| Total word count - document A      |          |        | 8367       |
| Total word count - document B      |          |        | 0          |
| Total word count - documents A + B |          |        | 8367       |

5/3,AB/2 (Item 2 from file: 348)  
 DIALOG(R) File 348:EUROPEAN PATENTS  
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01538255

**Porcine** circoviruses, vaccines and diagnostic reagents  
 Schweinecircoviren, Impfstoffe und diagnostische Reagenzien  
 Circovirus porcins, vaccins et reactifs de diagnostic

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 The University of Saskatchewan, (2506544), 52 Campus Drive, Saskatoon,  
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 Mc Neilly, Francis, 4 Lisleen Place, Newtownards BT3 4NH, (GB)

LEGAL REPRESENTATIVE:

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 Victoire, 75440 Paris Cedex 09, (FR)  
 PATENT (CC, No, Kind, Date): EP 1281760 A1 030205 (Basic)  
 APPLICATION (CC, No, Date): EP 2002017134 981001;  
 PRIORITY (CC, No, Date): FR 9712382 971003; FR 98873 980122; FR 983707  
 980320

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;  
 LU; MC; NL; PT; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 1019510 (EP 98946547)

RELATED DIVISIONAL NUMBER(S) - PN (AN):

(EP 2003016998)

INTERNATIONAL PATENT CLASS: C12N-015/34; C07K-014/01; A61K-039/12;  
 A61K-048/00; C12Q-001/68; C07K-016/08; G01N-033/53

ABSTRACT EP 1281760 A1 (Translated)

New type II **porcine** circovirus

A purified preparation of type II **porcine** circovirus (PCV).

Independent claims are also included for the following:

(a) preparation of PCV

(i) isolated from a physiological or tissue sample, particularly from a lesion, from a **pig** with symptoms of PMWS (**porcine** multisystemic wasting syndrome); or

(ii) produced by, and isolated from, in vitro cell cultures infected with the virus of (i);

(b) extract or culture supernatant, or antigen preparation, optionally purified, collected from in vitro cultures of cells infected with PCV;

(c) vaccine containing the products of (b);

(d) DNA fragments (A) of 1767 bp (1), 1767 bp (2), 1767 bp (3), 1768 bp (4) or 1768 bp (6), or containing an open reading frame (ORF) of PCV;

(e) polypeptides (I) encoded by (A) or these ORF;

in vitro expression vector containing (A), or these ORFs;

(f) polypeptides (Ia), optionally purified, expressed from the vector of (f);

(g) subunit vaccine containing at least one (I) or (Ia), diluent or vehicle and optionally an adjuvant;

in vivo expression vector, integrated into a genome, containing (A) or the ORFs;

(h) live or plasmid vaccine containing the vector of (j), and a diluent or vehicle;

(i) probe or primer containing all or part of (A) or the ORFs;

(j) mono- or poly-clonal antibodies raised against PCV, (I), (Ia) or their fragments; and

(k) detection of PCV by identifying in a body fluid or tissue sample an antigen or antibody specific for the antigen.

TRANSLATED ABSTRACT WORD COUNT: 245

ABSTRACT EP 1281760 A1

L'invention concerne des souches de circovirus porcins isolees a partir de prelevements pulmonaires ou ganglionnaires provenant d'elevage atteints par le syndrome de deperissement generalise de post-sevrage (en anglais PMWS). Elle concerne des preparations purifiees de ces souches, des vaccins classiques attenues ou inactives, des vaccins vivants recombinants, des vaccins plasmidiques et des vaccins de sous-unites, ainsi que des reactifs et methodes de diagnostic. Elle concerne aussi des fragments d'ADN pouvant etre utilises pour la production de sous-unites dans un vecteur d'expression in vitro ou comme sequences a integrer dans un vecteur d'expression in vivo de type virus ou plasmide.

ABSTRACT WORD COUNT: 100

LANGUAGE (Publication,Procedural,Application): French; French; French

FULLTEXT AVAILABILITY:

| Available Text                     | Language | Update | Word Count |
|------------------------------------|----------|--------|------------|
| CLAIMS A                           | (French) | 200306 | 176        |
| SPEC A                             | (French) | 200306 | 7570       |
| Total word count - document A      |          |        | 7746       |
| Total word count - document B      |          |        | 0          |
| Total word count - documents A + B |          |        | 7746       |

5/3,AB/3 (Item 3 from file: 348)

DIALOG(R) File 348:EUROPEAN PATENTS

(c) 2004 European Patent Office. All rts. reserv.

01504564

DRUGS CONTAINING REDUCED VITAMIN B2  
REDUZIERTES VITAMIN B2 ENTHALTENDE ARZNEIMITTEL  
MEDICAMENTS A BASE DE VITAMINE B2 REDUITE

PATENT ASSIGNEE:

Eisai Co., Ltd., (210778), 6-10, Koishikawa 4-chome, Bunkyo-ku, Tokyo  
112-8088, (JP), (Applicant designated States: all)

INVENTOR:

ARAKI, Seiichi, 1-35, Nagakunidai, Tsuchiura-shi, Ibaraki 300-0810, (JP)  
SUZUKI, Mamoru, 1-30-3, Matsushiro, Tsukuba-shi, Ibaraki 305-0035, (JP)  
SUGIHARA, Yoshiki, 4-6, Inarimae, Tsukuba-shi, Ibaraki 305-0061, (JP)  
TOYOSAWA, Toshio, 527-63, Kamihirooka, Tsukuba-shi, Ibaraki 305-0041,  
(JP)

LEGAL REPRESENTATIVE:

HOFFMANN - EITLE (101511), Patent- und Rechtsanwalte Arabellastrasse 4,  
81925 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 1371370 A1 031217 (Basic)  
WO 2002074313 020926

APPLICATION (CC, No, Date): EP 2002705355 020319; WO 2002JP2616 020319

PRIORITY (CC, No, Date): JP 200180578 010321

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;  
LU; MC; NL; PT; SE; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: A61K-031/525; A61K-031/675; A61K-031/7084;  
A61P-031/04; A61P-009/02; A61P-033/00

ABSTRACT EP 1371370 A1

The present invention provides an agent for preventing or treating infectious diseases, sepsis and/or septic shock, which has an excellent immunostimulating effect. More specifically, it provides an agent for immunostimulation and infection-protection and -treatment, and an agent for preventing or treating sepsis and septic shock, which comprise a reductant of riboflavin and/or a reductant of a riboflavin derivative or a pharmacologically acceptable salt of them as an active ingredient.

ABSTRACT WORD COUNT: 70

LANGUAGE (Publication,Procedural,Application): English; English; Japanese

FULLTEXT AVAILABILITY:

| Available Text                     | Language  | Update | Word Count |
|------------------------------------|-----------|--------|------------|
| CLAIMS A                           | (English) | 200351 | 701        |
| SPEC A                             | (English) | 200351 | 5310       |
| Total word count - document A      |           |        | 6011       |
| Total word count - document B      |           |        | 0          |
| Total word count - documents A + B |           |        | 6011       |

5/3,AB/4 (Item 4 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS  
(c) 2004 European Patent Office. All rts. reserv.

01436831

Lawsonia intracellularis vaccine  
Lawsonia intracellularis Impfstoff  
Lawsonia intracellularis vaccin

PATENT ASSIGNEE:

Akzo Nobel N.V., (200754), Velperweg 76, 6824 BM Arnhem, (NL),  
(Applicant designated States: all)

INVENTOR:

Jacobs, Antonius A. C., Ondersteweg 2, 5995 PS Kessel, (NL)  
Vermeij, Paul, Lepelstraat 3, 5845 BK St Anthonis, (NL)

LEGAL REPRESENTATIVE:

Keus, Jacobus Albertus Ronald (94292), INTERVET INTERNATIONAL B.V. P.O.  
Box 31, 5830 AA Boxmeer, (NL)

PATENT (CC, No, Kind, Date): EP 1219711 A2 020703 (Basic)  
EP 1219711 A3 021106

APPLICATION (CC, No, Date): EP 2001204919 011214;

PRIORITY (CC, No, Date): EP 2000204660 001220

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;  
LU; MC; NL; PT; SE; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: C12N-015/31; C12N-001/21; C12Q-001/68;  
C07K-014/195; A61K-039/02; A61K-039/295; A61K-039/40; A61K-048/00;  
G01N-033/569; C07K-014/205

ABSTRACT EP 1219711 A2

The present invention relates i.a. to nucleic acid sequences encoding novel *Lawsonia intracellularis* proteins. It furthermore relates to DNA fragments, recombinant DNA molecules and live recombinant carriers comprising these sequences. Also it relates to host cells comprising such nucleic acid sequences, DNA fragments, recombinant DNA molecules and live recombinant carriers. Moreover, the invention relates to proteins encoded by these nucleotide sequences. The invention also relates to vaccines for combating *Lawsonia intracellularis* infections and methods for the preparation thereof. Finally the invention relates to diagnostic tests for the detection of *Lawsonia intracellularis* DNA, the detection of *Lawsonia intracellularis* antigens and of antibodies against *Lawsonia intracellularis*.

ABSTRACT WORD COUNT: 105

NOTE:

Figure number on first page: NONE

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

| Available Text                     | Language  | Update | Word Count |
|------------------------------------|-----------|--------|------------|
| CLAIMS A                           | (English) | 200227 | 976        |
| SPEC A                             | (English) | 200227 | 7366       |
| Total word count - document A      |           |        | 8342       |
| Total word count - document B      |           |        | 0          |
| Total word count - documents A + B |           |        | 8342       |

5/3,AB/5 (Item 5 from file: 348)

DIALOG(R) File 348:EUROPEAN PATENTS

(c) 2004 European Patent Office. All rts. reserv.

01331346

AZALIDE ANTIBIOTIC COMPOSITIONS

ANTIBIOTISCHE AZALID-ZUSAMMENSETZUNGEN

COMPOSITIONS ANTIBIOTIQUES A BASE D'AZALIDE

PATENT ASSIGNEE:

10/039383

Pfizer Products Inc., (2434221), Eastern Point Road, Groton, Connecticut 06340, (US), (Proprietor designated states: all)

INVENTOR:

BOETTNER, Wayne Alan, Pfizer Global Research & Development, Eastern Point Road, Groton, CT 06340, (US)

LEGAL REPRESENTATIVE:

McMunn, Watson Palmer et al (72194), Pfizer Limited Patents Department Ramsgate Road, Sandwich, Kent CT13 9NJ, (GB)

PATENT (CC, No, Kind, Date): EP 1250343 A1 021023 (Basic)  
EP 1250343 B1 030625  
WO 2001055158 010802

APPLICATION (CC, No, Date): EP 2000979850 001130; WO 2000IB1824 001130

PRIORITY (CC, No, Date): US 178481 P 000127

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: C07H-017/00; A61K-031/70; A61P-031/04;  
A61P-033/02

NOTE:

No A-document published by EPO

LANGUAGE (Publication, Procedural, Application): English; English; English

FULLTEXT AVAILABILITY:

| Available Text                     | Language  | Update | Word Count |
|------------------------------------|-----------|--------|------------|
| CLAIMS B                           | (English) | 200326 | 923        |
| CLAIMS B                           | (German)  | 200326 | 809        |
| CLAIMS B                           | (French)  | 200326 | 961        |
| SPEC B                             | (English) | 200326 | 10789      |
| Total word count - document A      |           |        | 0          |
| Total word count - document B      |           |        | 13482      |
| Total word count - documents A + B |           |        | 13482      |

5/3,AB/6 (Item 6 from file: 348)

DIALOG(R) File 348:EUROPEAN PATENTS

(c) 2004 European Patent Office. All rts. reserv.

01276120

Oil-based adjuvant vaccine

Oladjuvienter Impfstoff

Adjuvant pour vaccin a base d'huile

PATENT ASSIGNEE:

NOF CORPORATION, (1558205), 20-3, Ebisu 4-chome, Shibuya-ku, Tokyo 150-6019, (JP), (Proprietor designated states: all)

Juridical Foundation, The Chemo-Sero-Therapeutic Research Institute, (283933), 6-1, Okubo 1-chome, Kumamoto-shi, Kumamoto 860-8568, (JP), (Proprietor designated states: all)

INVENTOR:

Saito, Koichi, 2-20-8-101, Minamitsukaguchi-cho, Amagasaki-shi, Hyogo 661-0012, (JP)

Kishimoto, Yoko, 1-7-8, Nishikigaoka, Uozumi-cho, Akashi-shi, Hyogo 674-0081, (JP)

Miyahara, Tokuji, 1866-1445, Kikudomi, Koushi-machi, Kikuchi-gun, Kumamoto 861-1112, (JP)

Takase, Kouzou, 3410-30, Sugimizu, Ohzu-machi, Kikuchi-gun, Kumamoto 869-1236, (JP)

LEGAL REPRESENTATIVE:

Searcher : Shears 571-272-2528

von Kreisler, Alek, Dipl.-Chem. et al (12437), Patentanwalte, von  
 Kreisler-Selting-Werner, Bahnhofsvorplatz 1 (Deichmannhaus), 50667 Köln  
 , (DE)

PATENT (CC, No, Kind, Date): EP 1097721 A2 010509 (Basic)  
 EP 1097721 A3 010523  
 EP 1097721 B1 030514

APPLICATION (CC, No, Date): EP 2000123909 001103;

PRIORITY (CC, No, Date): JP 99316121 991105

DESIGNATED STATES: BE; DE; DK; ES; FR; GB; IT; NL

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: A61K-009/113

ABSTRACT EP 1097721 A3

The present invention provides a W/O/W type oil adjuvant vaccine containing an outer aqueous phase containing 0.5 wt% - 20 wt% of a polyethylene glycol derivative having a molecular weight of 400 - 20,000, and an inner aqueous phase containing a biologically acceptable and effective amount of an antigen. The constitution of the present invention that a polyethylene glycol derivative having a specific molecular weight is contained in the outer aqueous phase enables preparation of a W/O/W type oil adjuvant vaccine showing a high adjuvant effect, reduced side effects such as topical response, superior preparation stability and superior workability to allow a person to give an injection easily due to the lowered viscosity.

ABSTRACT WORD COUNT: 114

LANGUAGE (Publication, Procedural, Application): English; English; English

FULLTEXT AVAILABILITY:

| Available Text                     | Language  | Update | Word Count |
|------------------------------------|-----------|--------|------------|
| CLAIMS A                           | (English) | 200119 | 457        |
| CLAIMS B                           | (English) | 200320 | 470        |
| CLAIMS B                           | (German)  | 200320 | 462        |
| CLAIMS B                           | (French)  | 200320 | 532        |
| SPEC A                             | (English) | 200119 | 7301       |
| SPEC B                             | (English) | 200320 | 7326       |
| Total word count - document A      |           |        | 7760       |
| Total word count - document B      |           |        | 8790       |
| Total word count - documents A + B |           |        | 16550      |

5/3,AB/7 (Item 7 from file: 348)

DIALOG(R) File 348:EUROPEAN PATENTS

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01174520

Use of life attenuated bacteria for the manufacture of a submucosal vaccine  
 Verwendung lebender abgeschwachter Bakterien zur Herstellung eines  
 submukosalen Impstoffes

Utilisation de bactéries vivantes atténuees pour la préparation d'un vaccin  
 sous-mucosal

PATENT ASSIGNEE:

Akzo Nobel N.V., (200754), Velperweg 76, 6824 BM Arnhem, (NL),  
 (Proprietor designated states: all)

INVENTOR:

Jacobs, Antonius Arnoldus Christiaan, Ondersteweg 2, 5995 PS Kessel,  
 (NL)

Goovaerts, Danny, Langenberg 18, 2460 Lichtaart, (BE)  
LEGAL REPRESENTATIVE:

Mestrom, Joannes Jozef Louis et al (74856), Intervet International B.V.,  
P.O. Box 31, 5830 AA Boxmeer, (NL)

PATENT (CC, No, Kind, Date): EP 1023903 A1 000802 (Basic)  
EP 1023903 B1 040114

APPLICATION (CC, No, Date): EP 2000200216 000120;

PRIORITY (CC, No, Date): EP 99200202 990126

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;  
LU; MC; NL; PT; SE

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: A61K-039/02; A61K-039/05; A61K-039/09;  
A61K-039/102; A61K-039/104; A61K-039/10; A61P-031/04

ABSTRACT EP 1023903 A1

The present invention relates to the use of live attenuated bacteria for  
the manufacture of a vaccine for submucosal administration.

ABSTRACT WORD COUNT: 21

LANGUAGE (Publication, Procedural, Application): English; English; English  
FULLTEXT AVAILABILITY:

| Available Text                     | Language  | Update | Word Count |
|------------------------------------|-----------|--------|------------|
| CLAIMS A                           | (English) | 200031 | 112        |
| CLAIMS B                           | (English) | 200403 | 149        |
| CLAIMS B                           | (German)  | 200403 | 149        |
| CLAIMS B                           | (French)  | 200403 | 152        |
| SPEC A                             | (English) | 200031 | 2667       |
| SPEC B                             | (English) | 200403 | 2580       |
| Total word count - document A      |           |        | 2780       |
| Total word count - document B      |           |        | 3030       |
| Total word count - documents A + B |           |        | 5810       |

5/3,AB/8 (Item 8 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS  
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01159829

PREVENTIVES/REMEDIES FOR INFECTION, ANTI-ENDOTOXIN AGENTS, VACCINE  
ADJUVANTS AND GROWTH PROMOTERS  
PRAVENTIVA/MITTEL FUR INFektION, ANTI-ENDOTOXIN MITTEL, IMPFSTOFF-ADJUVANZI  
EN SOWIE WACHSTUMSPROMOTOREN  
PROPHYLACTIQUES/MEDICAMENTS POUR L'INFECTION, AGENTS ANTI-ENDOTOXINE,  
ADJUVANTS DE VACCIN ET PROMOTEURS DE CROISSANCE

PATENT ASSIGNEE:

Shin Mitsui Sugar Co., Ltd., (1427013), 8-2, Nihonbashi Honcho 2-chome,  
Chuo-ku, Tokyo 103-8423, (JP), (Applicant designated States: all)

INVENTOR:

MIZUTANI, Takeo, 1194-33, Hazawa-cho, Kanagawa-ku, Yokohama-shi, Kanagawa  
221-0863, (JP)  
KOGE, Kenji, 12-9-201, Dai 4-chome, Kamakura-shi, Kanagawa 247-0061, (JP)  
NAGAI, Yukie, 5-44, Enzo 1-chome, Chigasaki-shi, Kanagawa 253-0084, (JP)  
MURAKAMI, Hiroshi, 5-1-305, Kobukuroya 2-chome, Kamakura-shi, Kanagawa  
247-0055, (JP)  
KAWAI, Toshikazu, 5-1-304, Kobukuroya 2-chome, Kamakura-shi, Kanagawa  
247-0055, (JP)

KASHIMURA, Jun, 22-3, Shinkamata 2-chome, Ota-ku, Tokyo 144-0054, (JP)  
SHIMIZU, Takeo, Fujinodai-danchi 2-27-501, 3549-3, Honmachida,  
Machida-shi, Tokyo 194-0032, (JP)  
ARAKI, Seiichi, 1-35, Nagakunidai, Tsuchiura-shi, Ibabaki 300-0810, (JP)  
SUZUKI, Mamoru, 30-2-A101, Matsushiro 1-chome, Tsukuba-shi, Ibaraki  
305-0035, (JP)

LEGAL REPRESENTATIVE:

Prins, Adrianus Willem et al (20903), Vereenigde, Nieuwe Parklaan 97,  
2587 BN Den Haag, (NL)

PATENT (CC, No, Kind, Date): EP 1120118 A1 010801 (Basic)  
WO 200021546 000420

APPLICATION (CC, No, Date): EP 99970325 991008; WO 99JP5583 991008

PRIORITY (CC, No, Date): JP 98301745 981009; JP 9935047 990212

DESIGNATED STATES: DE; ES; FR; GB; IT; NL

INTERNATIONAL PATENT CLASS: A61K-035/78; A61K-039/39; A23L-001/214;  
A23L-001/30; A23K-001/16

ABSTRACT EP 1120118 A1

A preventive or remedy for infection, an anti-endotoxin agents, a vaccine adjuvants and a growth promoter each comprising a sugar cane-derived extract as an active ingredient which agent is safe to man and animals. Also presented are foods and feeds comprising these agents.

ABSTRACT WORD COUNT: 45

NOTE:

Figure number on first page: NONE

LANGUAGE (Publication, Procedural, Application): English; English; Japanese

FULLTEXT AVAILABILITY:

| Available Text                     | Language  | Update | Word Count |
|------------------------------------|-----------|--------|------------|
| CLAIMS A                           | (English) | 200131 | 1674       |
| SPEC A                             | (English) | 200131 | 13040      |
| Total word count - document A      |           |        | 14714      |
| Total word count - document B      |           |        | 0          |
| Total word count - documents A + B |           |        | 14714      |

5/3,AB/9 (Item 9 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS  
(c) 2004 European Patent Office. All rts. reserv.

01043523

VACCINES DERIVED FROM **PORCINE** CIRCOVIRUSES  
SCHWEINECIRCOVIREN ABGELEITETE IMPFSTOFFE  
VACCINS A BASE DE CIRCOVIRUS PORCINS

PATENT ASSIGNEE:

MERIAL, (653413), 17, rue Bourgelat, 69002 Lyon, (FR), (Proprietor  
designated states: all)

The Queen's University of Belfast, (656553), Stoney Road, Stormont,  
Belfast BT4 3SD, (GB), (Proprietor designated states: all)

The University of Saskatchewan, (2506544), 52 Campus Drive, Saskatoon,  
Saskatchewan S7W 5B4, (CA), (Proprietor designated states: all)

INVENTOR:

ALLAN, Gordon, 51 Cabinhill Gardens, Belfast BT5 7AQ, (GB)

MEEHAN, Brian, 26 St. John's Close, 2 Laganbank Road, Belfast BT1 3LX,  
(GB)

CLARK, Edward, 22 Murphy Crescent, Saskatoon, Saskatchewan S7J 214, (CA)

ELLIS, John, 812, 13th Street East, Saskatoon, Saskatchewan S7N 0M3, (CA)  
 HAINES, Deborah, 812, 13th Street East, Saskatoon, Saskatchewan S7N 0M3, (CA)

HASSARD, Lori, 443 Perreault Lane, Saskatoon, Saskatchewan S7K 2A0, (CA)  
 HARDING, John, 43 Jubilee Drive, Humboldt, Saskatchewan S0K 2A0, (CA)  
 CHARREYRE, Catherine, Elisabeth, 42, rue Ferdinand Gauthier, F-69720 Saint-Laurent de Mure, (FR)

CHAPPUIS, Gilles, Emile, 3, rue Laurent Vibert, F-69006 Lyon, (FR)  
 MCNEILLY, Francis, 4 Lisleen Place, Newtownards, BT3 4NH, (GB)

**LEGAL REPRESENTATIVE:**

Colombet, Alain Andre et al (75672), Cabinet Lavoix, 2, Place d'Estienne d'Orves, 75441 Paris Cedex 09, (FR)

PATENT (CC, No, Kind, Date): EP 1019510 A1 000719 (Basic)  
 EP 1019510 B1 030716  
 WO 99018214 990415

APPLICATION (CC, No, Date): EP 98946547 981001; WO 98FR2107 981001

PRIORITY (CC, No, Date): FR 9712382 971003; FR 98873 980122; FR 983707 980320

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE

RELATED DIVISIONAL NUMBER(S) - PN (AN):

EP 1281760 (EP 2002017134)  
 INTERNATIONAL PATENT CLASS: C12N-015/34; C07K-014/01; A61K-039/12; A61K-048/00; C12Q-001/68; C07K-016/08; G01N-033/53

**NOTE:**

No A-document published by EPO  
 LANGUAGE (Publication, Procedural, Application): French; French; French

**FULLTEXT AVAILABILITY:**

| Available Text                     | Language  | Update | Word Count |
|------------------------------------|-----------|--------|------------|
| CLAIMS B                           | (English) | 200329 | 359        |
| CLAIMS B                           | (German)  | 200329 | 333        |
| CLAIMS B                           | (French)  | 200329 | 359        |
| SPEC B                             | (French)  | 200329 | 6923       |
| Total word count - document A      |           |        | 0          |
| Total word count - document B      |           |        | 7974       |
| Total word count - documents A + B |           |        | 7974       |

5/3,AB/10 (Item 10 from file: 348)  
 DIALOG(R) File 348:EUROPEAN PATENTS  
 (c) 2004 European Patent Office. All rts. reserv.

00985690

Clostridium perfringens vaccine  
 Clostridium perfringens Impfstoff  
 Vaccine contre clostridium perfringens

**PATENT ASSIGNEE:**

Akzo Nobel N.V., (200754), Velperweg 76, 6824 BM Arnhem, (NL),  
 (applicant designated states:  
 AT;BE;CH;CY;DE;DK;ES;FI;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT;SE)

**INVENTOR:**

Sergers, Ruud Philip Antoon Maria, Groenling 3, 5831 MZ Boxmeer, (NL)  
 Waterfield, Nicolas Robin, 20 Lucerne Close, Cherry Hinton, Cambridge CB1 4YR, (GB)  
 Frandsen, Peer Lyng, 56 Borgmester Schneiders Vej, 2840 Holte, (DK)  
 Wells, Jeremy Mark, The Cottage Old House RD, Balsham, Cambridge CB1 GEF,

(GB)

## LEGAL REPRESENTATIVE:

Keus, Jacobus Albertus Ronald et al (94292), INTERVET INTERNATIONAL B.V.  
 P.O. Box 31, 5830 AA Boxmeer, (NL)

PATENT (CC, No, Kind, Date): EP 892054 A1 990120 (Basic)

APPLICATION (CC, No, Date): EP 98202032 980617;

PRIORITY (CC, No, Date): EP 97201888 970620

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE

INTERNATIONAL PATENT CLASS: C12N-015/31; A61K-039/08; C07K-014/33; C12N-001/21;

## ABSTRACT EP 892054 A1

The present invention relates to detoxified immunogenic derivatives of Clostridium perfringens (beta)-toxin or an immunogenic fragment thereof that have as a characteristic that they carry a mutation in the (beta)-toxin amino acid sequence, not found in the wild-type (beta)-toxin amino acid sequence. The invention also relates to genes encoding such (beta)-toxins, as well as to expression systems expressing such (beta)-toxins. Moreover, the invention relates to bacterial expression systems expressing a native (beta)-toxin. Finally, the invention relates to vaccines based upon detoxified immunogenic derivatives of Clostridium perfringens (beta)-toxin, and methods for the preparation of such vaccines.

ABSTRACT WORD COUNT: 96

LANGUAGE (Publication, Procedural, Application): English; English; English

## FULLTEXT AVAILABILITY:

| Available Text                     | Language  | Update | Word Count |
|------------------------------------|-----------|--------|------------|
| CLAIMS A                           | (English) | 9903   | 583        |
| SPEC A                             | (English) | 9903   | 7428       |
| Total word count - document A      |           |        | 8011       |
| Total word count - document B      |           |        | 0          |
| Total word count - documents A + B |           |        | 8011       |

5/3, AB/11 (Item 11 from file: 348)  
 DIALOG(R) File 348: EUROPEAN PATENTS  
 (c) 2004 European Patent Office. All rts. reserv.

00826371

Adjuvant complexes

Komplexe mit Adjuvans-Aktivitat

Complexes a activite adjuvante

## PATENT ASSIGNEE:

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10/039383

PATENT (CC, No, Kind, Date): EP 766967 A1 970409 (Basic)  
APPLICATION (CC, No, Date): EP 96202059 900831;  
PRIORITY (CC, No, Date): GB 8919819 890901  
DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; LU; NL; SE  
RELATED PARENT NUMBER(S) - PN (AN):  
EP 415794 (EP 903095701)  
INTERNATIONAL PATENT CLASS: A61K-039/39;

ABSTRACT EP 766967 A1

"Empty" iscom matrices, ie. formed without an antigen, and also conventional iscoms (formed with an antigen) can be formed without removing the solubilising agent used for the antigen.

In each case, the iscom can be 3-dimensional or, if formed without phospholipid, 2-dimensional.

The glycoside is preferably Quil A and the sterol is preferably cholesterol.

ABSTRACT WORD COUNT: 55

LANGUAGE (Publication, Procedural, Application): English; English; English

FULLTEXT AVAILABILITY:

| Available Text                     | Language  | Update | Word Count |
|------------------------------------|-----------|--------|------------|
| CLAIMS A                           | (English) | EPAB97 | 140        |
| SPEC A                             | (English) | EPAB97 | 4336       |
| Total word count - document A      |           |        | 4476       |
| Total word count - document B      |           |        | 0          |
| Total word count - documents A + B |           |        | 4476       |

5/3,AB/12 (Item 12 from file: 348)

DIALOG(R) File 348:EUROPEAN PATENTS  
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00721011

INOCULATION OF ANIMALS WITH DRIED, PELLETED BIOLOGICAL MATERIALS  
IMPFUNG VON TIERN MIT GETROCKNETEN PELLETTIERTEN BIOLOGISCHEN MATERIALIEN  
INOCULATION D'ANIMAUX A L'AIDE DE SUBSTANCES BIOLOGIQUES SECHES EN DRAGEES  
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PATENT (CC, No, Kind, Date): EP 744937 A1 961204 (Basic)  
EP 744937 B1 021002  
WO 95022314 950824

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PRIORITY (CC, No, Date): US 198836 940218; US 356477 941215

DESIGNATED STATES: BE; DE; DK; ES; FR; GB; IE; IT; NL

INTERNATIONAL PATENT CLASS: A61K-009/00

NOTE:

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LANGUAGE (Publication, Procedural, Application): English; English; English  
FULLTEXT AVAILABILITY:

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| Available Text                     | Language  | Update | Word Count |
|------------------------------------|-----------|--------|------------|
| CLAIMS B                           | (English) | 200240 | 306        |
| CLAIMS B                           | (German)  | 200240 | 273        |
| CLAIMS B                           | (French)  | 200240 | 315        |
| SPEC B                             | (English) | 200240 | 3551       |
| Total word count - document A      |           |        | 0          |
| Total word count - document B      |           |        | 4445       |
| Total word count - documents A + B |           |        | 4445       |

5/3,AB/13 (Item 13 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS  
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00508396

INACTIVATED **MYCOPLASMA HYOPNEUMONIAE** BACTERIN AND METHOD OF USE  
THEREOF  
INAKTIVIERTES **MYCOPLASMA HYOPNEUMONIAE** BACTERIN UND VERFAHREN ZU DESSEN  
ANWENDUNG  
BACTERINE DE **MYCOPLASMA HYOPNEUMONIAE** INACTIVE ET METHODE  
D'UTILISATION DE CETTE BACTERINE

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PATENT (CC, No, Kind, Date): EP 550477 A1 930714 (Basic)  
EP 550477 A1 931201  
EP 550477 B1 970423  
WO 9203157 920305

APPLICATION (CC, No, Date): EP 91915945 910816; WO 91US5858 910816

PRIORITY (CC, No, Date): US 568427 900816

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; LU; NL; SE  
INTERNATIONAL PATENT CLASS: A61K-039/02; A61K-039/39; C12N-001/20;  
C12N-001/20; C12R-001/35

NOTE:

No A-document published by EPO

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

| Available Text                     | Language  | Update | Word Count |
|------------------------------------|-----------|--------|------------|
| CLAIMS B                           | (English) | EPAB97 | 647        |
| CLAIMS B                           | (German)  | EPAB97 | 621        |
| CLAIMS B                           | (French)  | EPAB97 | 664        |
| SPEC B                             | (English) | EPAB97 | 7819       |
| Total word count - document A      |           |        | 0          |
| Total word count - document B      |           |        | 9751       |
| Total word count - documents A + B |           |        | 9751       |

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